

PUBLIC HEALTH REPORTS

VOL. 31

JANUARY 14, 1916

No. 2

ILLINOIS PURE-FOOD LAW CONSTRUED.

HELD BY THE COURTS TO PROHIBIT THE SALE OF FOOD PRESERVATIVES CONTAINING BORIC ACID.

The Illinois pure food and drugs act prohibits the sale of food containing "any added poisonous or other added deleterious ingredient which may render such article injurious to health," and declares boric acid to be unwholesome and injurious. Another section of the same law prohibits the sale of any unwholesome or injurious preservative intended for use in foods.

A dealer was convicted of selling a preservative for canned fruit and vegetables which contained boric acid. He contended that the article sold was not a food, and it was not proved that it was unwholesome or injurious; but the State court held that the law was broad enough to prohibit the sale of any preservative for food which contained boric acid, and the Supreme Court of the United States adopted the view of the State court.

The opinion of the United States Supreme Court is published in this issue of the Public Health Reports, page 79.

THE PRACTICING PHYSICIAN.

WHAT HE SHOULD KNOW ABOUT THE REGISTRATION OF BIRTHS AND DEATHS AND THE REPORTING OF SICKNESS.

By JOHN W. TRASK, Assistant Surgeon General, United States Public Health Service.

The practicing physician occupies in the community a position of special responsibility. The sick unreservedly trust to him for the attention which may mean life or death to them. He is present when children are born, administering to both the mother and the child. He is aware of the toll being constantly paid to the grim reaper. Of the deaths of those who have lived the full span of years, of parents who can ill be spared, and of youths and maidens whose lives have just begun—of these he knows, for if not present at the hour of death it is because he is on his way to the bedside or has but recently left. The physician is the first to know when pestilence is abroad in the

community, when infantile paralysis is loose and maiming children. He knows where typhoid is laying its burden of protracted illness and invalidism, where malaria is chronically poisoning both the old and young, where tuberculosis is replacing health and vigor with sickness, misery, and death. He knows these things because in the community he alone is brought into contact with the sick by the very nature of his vocation.

Whenever a State has evolved beyond the primitive simplicity of the pioneer stage the people have recognized the special responsibilities pertaining to the practice of medicine and have attempted by statute to limit practice to those possessing certain qualifications. They have also imposed upon physicians duties which physicians alone can fulfill and which are necessary to the social life of the community and the common welfare. Among these duties is that of furnishing for official record certain information regarding births and deaths occurring in their practice. And whenever a community reaches in its development the stage where it desires to control the preventable diseases, physicians are required to report the occurrence of cases of these diseases among their patients.

For these reasons every practicing physician should know the purposes of the registration of births and deaths and the notification of the occurrence of preventable diseases, and the uses made of the records. He should also know thoroughly the legal requirements of his community in regard to these matters.

Registration of Births.

The establishment of community records, such as those resulting from the registration of births, is one of the first evidences that a community expects to have some degree of permanency and that the inhabitants do not consider themselves as temporary residents. This was as true of the Greek and Roman civilizations as of our own. The necessity for the registration of births is felt in many of the activities of the modern State or city. The uses of registration are legal and social. It also may serve an important function in public health administration.

Legal and social uses.—The registration of a child's birth forms a legal record that is frequently useful and may be of the greatest importance. It establishes the date of birth and the child's parentage. It may be required to establish the child's age for attendance at public schools, or for permission to work in States where restrictions are placed upon child labor; to show in courts of law whether a girl has reached the age of consent, or whether individuals have attained the age when they may marry without the parent's permission; to establish age in connection with the granting of pensions, military and jury duty, and voting. It may be important in connection with the bequeathing and

inheritance of property or to furnish acceptable evidence of genealogy, and in fact may be important and useful in possible events too numerous to mention.

A duty to the child.—It is needless to say that the average American community, composed of American fathers and mothers, may properly be expected to be more zealous in the care of its babies and their welfare than in that of its cattle, horses, and dogs, even though the animals be of pedigreed stock. It is the custom to register the births of blooded animals, that their parentage may be authenticated by carefully preserved records, and not a mere matter of neighborhood memory or hearsay. There are many more reasons why a baby's parentage and rights should be safeguarded and protected by an official registration of its birth than there are for recording the birth and parentage of a colt or calf. Registration of its time and place of birth is a duty the community owes the child, its future citizen.

A duty to the mother.—It is important to a mother that a proper record that will be fully accepted and unquestioned in courts of law shall be made of her child's birth and parentage. This may be necessary to settle questions of legitimacy and to determine the legal heirs to property.

An important duty of the attending physician or midwife.—The official registration of its birth, showing parentage and when and where born, is the right of every child. The newborn babe being helpless in the matter, most communities have placed the duty and responsibility of the registration of the birth upon the attending physician or midwife. Under the circumstances no physician or midwife has performed his whole duty to either of his patients, the child or the mother, until a properly completed birth certificate has been registered. In fact, so great may be the importance to the child in after years of having its birth registered that a physician who neglects his patient's interests to such a degree as to fail to register a birth might in all justice be considered an improper person to hold a license to practice medicine. Very probably, as parents grow to appreciate the importance of the registration of their children's births, the failure of the attending physician or midwife to register the required certificates may become a not uncommon cause of suits at law for damages.

Necessary to an orderly and progressive community.—Without official birth records the rights of the individual will be frequently jeopardized, legal procedure will often be unnecessarily complicated, child labor laws and school attendance will be impossible of enforcement, there will be difficulty in determining whether those desiring to cast the ballot have reached the voting age, and other difficulties too numerous to mention will arise. Then, too, birth records show the

additions made to the population by natural increase, and the elements of the population supplying this increase.

Uses in public health administration.—Registration of births shows where the babies are and makes possible such observance and protection as the health department desires to extend. With birth registration it is possible for the health authorities to see that the babies and their mothers have proper care and attention.

Nature of information secured by registration of births.—The information required to be registered concerning each child born usually includes certain facts relating to the child and the circumstances of its birth, together with certain items concerning the parents. The essential facts are the name of the child, its sex, and the date and place of birth, and the names and residence of the parents. There are many other items of information concerning births which are of great value and serve various purposes, such as the age, color, nativity, and occupation of the parents, and whether the child is a single birth, a twin, or a triplet. These facts are usually required to be stated.

The items registered serve two principal purposes. They serve, first, to identify the child and to establish its age and parentage, and, second, to furnish statistical data, which when compiled and analyzed give useful information regarding the rate at which the population is reproducing itself and the relative rates of increase of the various elements of the population.

Manner of registration.—In birth registration those upon whom the completeness of registration and the accuracy of birth records depend are for the most part, the attending physicians, sometimes midwives, and occasionally, in the absence of both of these, the parents.

Births are usually required to be registered with an official appointed for the purpose and known as a registrar. Customarily it is the same official with whom deaths are registered. The certificate is usually required to be registered within a specified time after the birth of the child, and the physician has not completed his task nor fulfilled his obligations to the child and its mother until an accurately filled out certificate has been filed with the registrar. The failure to file such a certificate is a neglect of the interests of both the child and the mother.

Standard birth certificate for United States.—The standard form of birth certificate approved by the Bureau of the Census and recommended for use in the United States is shown on page 51.

Frequently the child is not named until some time after birth, so that it is impossible to insert in the certificate the full name of the infant. To meet this difficulty the Bureau of the Census recom-

mends the use of a "supplemental report of birth" which is to be filled in after the child has been named and filed with the registrar, who attaches it to the original certificate. (See below.)

United States Standard Certificate of Birth.

PLACE OF BIRTH

County of _____

Township of _____

Village of _____

City of _____ (No. _____) St. _____ Ward _____

Department of Commerce and Labor
BUREAU OF THE CENSUS
STANDARD CERTIFICATE OF BIRTH

Registered No. _____

FULL NAME OF CHILD _____

(If child is not yet named, make supplemental report, as directed)

Sex of Child _____ **Twin, triplet, or other?** _____ **Number in order of birth** _____ **Legitimate?** _____ **Date of birth** _____

(To be answered only in case of plural births)

FATHER **MOTHER**

FULL NAME **FULL MAIDEN NAME**

RESIDENCE **RESIDENCE**

COLOR **AGE AT LAST BIRTHDAY** **COLOR** **AGE AT LAST BIRTHDAY**

BIRTHPLACE **BIRTHPLACE**

OCCUPATION **OCCUPATION**

Number of children born to this mother, including present birth _____ Number of children of this mother now living _____

CERTIFICATE OF ATTENDING PHYSICIAN OR MIDWIFE*

I hereby certify that I attended the birth of this child, who was _____ at _____ M., on the date above stated.

(Signature) _____

(Physician or Midwife)

*When there was no attending physician or midwife, then the father, householder, etc., should make this return. A stillborn child is one that neither breathes nor shows other evidence of life after birth.

Given name added from a supplemental report _____ Address _____

Filed _____ 19 _____

11-555

MARGIN RESERVED FOR BINDING

Supplemental Report of Birth

(STATE) _____

(This return should preferably be made by the person who made the original)

Registered Number* _____

Place of birth* _____ No. _____ St. _____

(Registration district)

SEX OF CHILD* **Twin,* triplet, or other?** **Number in order of birth**

DATE OF BIRTH* _____ 1900 _____

(Month) (Day) (Year)

FULL NAME **FATHER**

FULL MAIDEN NAME **MOTHER**

I HEREBY CERTIFY that the child described herein has been named:

(Given name, in full) (Surname)

(Signature) _____

(Physician or midwife)

*These items to be entered by the Registrar before giving out this form

11-551

Birth rates.—By the birth rate is meant the frequency with which births occur. There are several ways in which the birth rate of a community may be expressed, and each method of statement gives information not given by the others. The birth rate, however, is usually expressed as the number of births occurring during a year for each 1,000 of the population. This is known as the crude birth rate. The crude birth rate shows the net result to the community of the several factors governing reproduction—the number of women of child-bearing age, the number of those who are married, the frequency of illegitimacy, etc. In conjunction with the crude death rate it shows the rate at which the community is reproducing itself by natural increase. The birth rate is sometimes expressed as the number of births during a year for each 1,000 women of child-bearing age and at times as the number of legitimate births for each 1,000 married women of child-bearing age.

Registration area for births.—The director of the Census has established a tentative registration area for births for the calendar year 1915. The States which will be in this area are Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, Michigan, Minnesota, and the District of Columbia. The births registered in these States will be compiled and tabulated by the Bureau of the Census and the results published as is now done by the bureau with deaths in the registration area for deaths. In the past there has been no recognized registration area for births in the United States, and annual birth statistics have therefore not heretofore been published by the Bureau of the Census. The States included in the tentative area represent approximately 31 per cent of the total population of the country, and are supposed to be the ones in which birth registration is the most satisfactory, although it is recognized that registration is probably not complete in any of those included.

Registration of Deaths.

Official knowledge of every death and its cause is necessary in the interest of law, order, and personal safety. Crime is likely to be more common where no official cognizance is taken of the disposal of bodies. For this reason the need for the official registration of deaths is felt by a community and enforced at an earlier stage in its development than is the registration of births.

Legal and social uses.—Death registration serves a number of highly important purposes. Its functions are legal and social. Death registration is not only useful in preventing and detecting crime through the restrictions placed upon the disposal of dead bodies, but it serves also as evidence in the inheritance of property and in the settlement of life insurance contracts and policies. It is

only proper that the time, place, and cause of death of each individual should be made a permanent record for both sentimental and legal reasons.

Through the study of the resulting records, death registration makes it possible to show by mathematical computations and statistical methods the extent and rate of change in population produced by deaths; the average duration of life; and, to the extent that the certified causes of death have been correctly stated, the relative frequency with which the several causes produce death. Death statistics by comparison with birth statistics give useful information regarding population increase or decrease.

Public health uses.—The registration of deaths has also performed a distinct service in public health administration. In the absence of definite information of the prevalence of the preventable diseases, available where cases of these diseases are required to be reported, records of deaths have furnished an index whereby their prevalence might be estimated. Under these circumstances mortality records have been an important factor in bringing communities to a realization of the need for measures to control such diseases.

The right of the decedent's family.—In the interests of the decedent's family it is highly desirable that official record be made of a death. This is especially true in connection with the settlement of life insurance contracts and the inheritance of property.

Manner of registration.—In registering a death a blank or form, known as a "death certificate," is filled out and filed with an official usually known as a registrar. Responsibility for the registration of deaths is sometimes imposed upon the family of the decedent, occasionally upon the physician last in attendance. The Model State Law for the registration of births and deaths, indorsed by both the American Medical Association and the Southern Medical Association, places the responsibility of seeing that a certificate is properly made out and filed with the registrar primarily upon the undertaker in the following words:

SEC. 9. That the undertaker, or person acting as undertaker, shall file the certificate of death with the local registrar of the district in which the death occurred and obtain a burial or removal permit prior to any disposition of the body. He shall obtain the required personal and statistical particulars from the person best qualified to supply them, over the signature and address of his informant. He shall then present the certificate to the attending physician, if any, or to the health officer or coroner, as directed by the local registrar, for the medical certificate of the cause of death and other particulars necessary to complete the record, as specified in sections 7 and 8. And he shall then state the facts required relative to the date and place of burial or removal, over his signature and with his address, and present the completed certificate to the local registrar in order to obtain a permit for burial, removal, or other disposition of the body. The undertaker shall deliver the burial permit to the person in charge of the place of burial, before interring or otherwise disposing of the body; or shall attach the removal permit to the box containing the corpse, when shipped by any transportation

company; said permit to accompany the corpse to its destination, where, if within the State of, it shall be delivered to the person in charge of the place of burial.

Nature of information secured by registration of deaths.—The essential data recorded on death certificates are the name, sex, color, age, conjugal condition, occupation, and nativity of the decedent, and the time, place, and cause of death. The standard certificate of death recommended by the Bureau of the Census calls for the following information:

Place of death.

Name, sex, color, race, conjugal condition, age, date of birth, occupation, and birthplace of decedent, name and birthplace of father, maiden name and birthplace of mother.

Signature and address of informant giving preceding information.

Date and time of death, a statement as to the duration of medical attendance on the decedent, the cause of death, and the duration of the last illness, are to be given by the physician, if any, last in attendance.

When the decedent was a recent resident or died in a hospital or other institution, the length of residence at place of death is to be given and also the former or usual residence and the place where the disease or injury was contracted.

The date and intended place of burial and the address of the undertaker are to be given by the undertaker over his signature.

The date when the certificate is filed is inserted by the registrar with his signature.

Death rates.—The records of deaths in a community show, among other things, the number of persons dying. In comparing the deaths in different years or of separate communities it is necessary to express the frequency of deaths in terms of a unit of population during a specified time, for different cities will have different numbers of inhabitants and the population of a given city will change from year to year. The usual method of expressing the death rate is in terms of the number of deaths occurring during a year per 1,000 population. In ascertaining this rate the total deaths and the entire population enter into the computation. This rate is called the crude death rate.

Specific death rates.—It is often desired to know the death rates of special groups of the population, for example, of males or of females, or of persons over 40 years of age, or the death rate from one cause, as typhoid fever. These rates of special or limited groups of the population or of deaths from special causes are known as specific death rates. They are expressed in terms of the number of deaths occurring in the subgroup in a year per 1,000 (or 10,000, or 100,000, or 1,000,000) persons in the subgroup. If the rate is that of a specific cause or disease it is usually based upon the number of deaths from the disease per 1,000, or 100,000, or 1,000,000 population.

Among the most important of the specific rates are those relating to age groups. Their significance is shown by the following statement of death rates for the various age groups in the registration States during the year 1911 taken from the reports of the Bureau of the Census:

Age group.	Death rate per 1,000.	Age group.	Death rate per 1,000.
Under 1 year.....	112.9	35 to 44 years.....	8.9
1 to 4 years.....	11.8	45 to 54 years.....	13.6
5 to 9 years.....	3.1	55 to 64 years.....	26.2
10 to 14 years.....	2.2	65 to 74 years.....	55.2
15 to 19 years.....	3.6	75 years and over.....	138.9
20 to 24 years.....	5.2	All ages.....	15.9
25 to 34 years.....	6.4		

Specific rates by color are also important. In the registration area for deaths in 1913 the death rate for the white population was 13.7 and that of the colored 21.9 per 1,000, while the rate of the two groups taken together was 14.1 per 1,000.

The death rate differs also in the two sexes. In the registration area for deaths in 1911 (the last year for which figures are available) the death rate for males was 14.7 and for females 13 per 1,000.

Reporting of Sickness.

In the complex life of modern civilization the individual can not protect himself from disease. The danger to him of infection from the sick and diseased whom he does not see, and of whose existence he is himself unaware, may be greater than the danger from the sick among those immediately about him. One can protect himself from infection from the sick of whom he knows, but is in large measure helpless to protect himself from the disease of the sick of whose existence he is in ignorance. For the latter one depends upon the health department.

The work of the health department is to control the controllable diseases, but it is impossible for any health department, be its statutory powers and available appropriations never so great, to effectively control any disease without first having information as to whether the disease is present in the community, and, if present, how prevalent and where and under what conditions cases are occurring. The mere appointment of a health officer, and the appropriation of money will not protect against disease. The control of disease is a work which requires definite information and knowledge of the occurrence of cases made use of by persons trained in epidemiology—that is, by persons having knowledge of the conditions which produce disease or cause its spread.

The community is helpless to control any disease in the absence of definite knowledge of the conditions under which cases are occurring, and a health department which does not know of the prevalence of disease within its jurisdiction is a health department in name only.

There are two main classes of controllable diseases at present recognized. These are communicable diseases and occupational diseases.

The communicable diseases.—The communicable diseases spread from individual to individual. Each case is a focus from which many persons may receive infection. Each focus is a potential epidemic. With but one or two exceptions every attempt at the control of communicable diseases other than by ascertaining the cases that occur, and the conditions under which they develop, has been a failure.

Occupational diseases.—Occupational diseases, of which lead poisoning and miners' phthisis are examples, are due to industrial environment and can be prevented only by ascertaining where conditions exist which are capable of producing them in workmen. Each case of an occupational disease shows where conditions of this kind exist, for the fact that a case has developed is conclusive evidence of the presence of conditions capable of producing the disease. To find where conditions exist which will produce these diseases it is, therefore, necessary to know of each case that occurs, and the time, place, and conditions under which it occurs.

Nature of information secured from reports of sickness (morbidity reports).—It is the practice for health departments to furnish to physicians notification blanks upon which the reports are to be made. In some instances these are in the form of post cards, which have proper spaces indicated for notation of the required information. The information to be given varies somewhat in the several States, but usually provides for a statement of the name, age, sex, and address of the patient, so that the health officer can locate and identify the case, the nature of the disease, the date, and the signature of the reporting physician.

The standard notification blank adopted by the Conference of State and Territorial Health Authorities with the Public Health Service of the United States is shown on the opposite page.

Standard notification blank.

....., 191	
(Date.)	
Disease or suspected disease.....	
Time of onset of disease.....	
Patient's name....., age....., sex....., race.....	
Patient's address....., occupation.....	
School attended or place of employment.....	
Number in household: Adults....., children.....	
Probable source of infection or origin of disease.....	
If the disease is smallpox, type....., number of times successfully vaccinated and approximate dates.....	
If typhoid fever, scarlet fever, diphtheria, or septic sore throat, was patient, or is any member of household, engaged in the production or handling of milk.....	
Address of reporting physician.....	
Signature of physician.....	

It will be noted that the blank calls for the following data:

1. Date.
2. Name of disease or suspected disease.
3. Time of onset of disease.
4. Patient's name, age, sex, race, and address. (This is largely for purposes of identification and location.)
5. Patient's occupation. (This serves to show both the possible origin of the disease and the probability that others have been or may be exposed.)
6. School attended by or place of employment of patient. (Serves same purpose as the preceding.)
7. Number of persons in the household, number of adults and number of children. (To indicate the nature of the household and the probable danger of the spread of the disease.)
8. The physician's opinion of the probable source of infection or origin of the disease. (This gives important information and frequently reveals unreported cases. It is of particular value in occupational diseases.)
9. If the disease is smallpox, the type (whether the mild or virulent strain) and the number of times the patient has been successfully vaccinated, and the approximate dates. (This gives the vaccination status and history.)
10. If the disease is typhoid fever, scarlet fever, diphtheria, or septic sore throat, whether the patient had been or whether any member of the household is engaged in the production or handling of milk. (These diseases being frequently spread through milk, this information is important to indicate measures to prevent further spread.)
11. Address and signature of the physician making the report.

According to the Model State Law for reports of sickness these reports are to be mailed immediately to the local health department, so that proper measures can be taken to prevent the spread of the disease or to find the focus or source from which the case originated, that the occurrence of additional cases may be prevented. Sometimes attending physicians are required to report also when patients recover or the case terminates fatally.

Manner of notification.—The responsibility for reporting the occurrence of disease is placed primarily upon the physician, inasmuch as he is not only the only one who comes in contact with a large proportion of the sick, but is also the only one able in many instances to make a proper diagnosis. The health department furnishes forms for the purpose. Usually as soon as a case of a reportable disease is recognized the report is to be made out and mailed or sent by messenger to the health department. In cities where the telephone is available it would be better to notify the health department by telephone in cases of the more dangerous communicable diseases and let the regular report follow by mail. When they arrive at the health department the reports go to the individual or division which has charge of the control of diseases.

Summary of the uses of morbidity reports.—The part played in public health administration by the reports of cases of sickness made by practicing physicians may be briefly summarized as follows:

1. In the communicable diseases, morbidity reports show the occurrence of cases which constitute foci from which the disease may spread to others, as in scarlet fever, typhoid fever, tuberculosis, or yellow fever, and make it possible to find the previously unrecognized cases and to take proper precautions to protect the family of the patient, his associates, or the community at large.

2. In some diseases morbidity reports make it possible to see that the sick receive proper treatment, as in ophthalmia neonatorum, diphtheria, and, in certain cities, tuberculosis. The reporting of cases of ophthalmia in the newborn makes it possible to save the sight of some infants who would otherwise not receive adequate treatment until after much damage had been done. In diphtheria the health department can be of service in furnishing antitoxin. Some cities furnish hospital or other relief to consumptives who would otherwise be without proper treatment.

3. In diseases that are not communicable, such as those due to occupation or environment, reported cases show the location or conditions which are causing illness or injury. This makes it possible to remedy the faulty conditions, so that others may not be similarly injured.

4. In certain diseases, of which the cause or means of spread is unknown, morbidity reports show their geographic distribution and varying prevalence and the conditions under which cases occur. This information has great potential value in attempts to ascertain their causes and means of spread.

5. Reports of the occurrence of disease are necessary to show the need of certain sanitary measures or works and to control and check the efficiency of such measures or works when put into operation. In pulmonary tuberculosis such reports show the number of consump-

tives in the community and the need of sanatoria. In malaria they show the prevalence of the disease, the need for drainage and other antimosquito work, the efficiency of such work when in operation, and when a change in the prophylactic measures is needed, or additional ones are necessary. In typhoid fever they show faults in the water supply or in the control of the production and distribution of milk, or in the disposal of excreta in special localities.

6. Morbidity reports when recorded over a period of time and properly compiled become a record of the past occurrence of disease. They show the relative prevalence of disease from year to year and under varying conditions. They show the effect of the introduction of public-health measures and of sanitary works. They give a history of disease not obtainable in their absence.

Conclusion.

The practicing physician has responsibilities in regard to the registration of births and deaths, and the reporting of cases of the notifiable diseases which he alone can perform. If he fails to register a birth he is neglecting the welfare of his patients, the child, and its mother. If he fails to give accurately the data called for in the medical part of a death certificate he is neglecting the welfare of the community. If he fails to report promptly his cases of the notifiable diseases he is obstructing the work of the health department and making difficult the control of disease and the protection of the health and lives of his fellow citizens.

MILK-BORNE TYPHOID FEVER.

REPORT OF AN OUTBREAK AT GALLUP, N. MEX.

By F. C. SMITH, Surgeon, United States Public Health Service.

The investigation, of which this is a report, was made in compliance with a request to the Surgeon General, United States Public Health Service, from the mayor and health officer of Gallup, October 15, 1915.

Character of the Outbreak.

About 80 cases of sickness occurred in the town of Gallup between September 18 and October 12, 1915, which were diagnosed by some of the local physicians as typhoid fever, but by others as "mountain fever" and "bilious mountain fever," by which it appears was meant a disease similar to but quite distinct from typhoid fever. The epidemic was characterized by the presence of many mild and abortive cases. Constipation was the rule. There was apparently no prevailing gastro-enteritis, which so commonly precedes or accompanies an outbreak of typhoid. The initial symptoms were often those of influenza. The fever sometimes reached normal at the end of two

weeks, and many patients were confined to bed for only a few days. On the other hand, there were a number of severe cases of typical typhoid fever, with five deaths, and the mild form of fever prevalent had many of the characteristic symptoms and physical signs of typhoid.

Diagnosis.

Blood drawn from six of the doubtful cases, on the morning the investigation was begun, and sent to an Albuquerque laboratory, was reported by wire on the following day, October 19, positive in each case for the agglutination test. Further confirmation of the diagnosis of typhoid was subsequently received from the United States Hygienic Laboratory, where specimens of blood had also been sent.

Immediate Suppressive Measures.

A preliminary survey made October 18 had shown that nearly all the cases of fever occurred upon the route of the principal dairyman. A visit to his farm, 3 miles below the town, revealed the fact that the premises, including the well, had been flooded about six weeks previously with water containing the effluent from the town sewer which discharged into an arroyo, the Rio Puercos, about $2\frac{1}{2}$ miles above the dairy farm. An improvised pasteurizing plant was made and installed under the writer's direction on October 19 and began operation the same day. The problem of pasteurization was simplified by the fact that the milk was bottled at the distributing station in town, at which place pasteurization of the finished product was undertaken.

At this time, October 19, it seemed possible that there might be other sources than the one dairy. Accordingly, the local press was requested to give notice that as a temporary measure all drinking water should be boiled and all milk not pasteurized when delivered should be scalded. It is not probable that any large number of persons heeded this warning.

Measures were taken to secure a visiting nurse for the teaching of bedside prophylaxis, and she arrived a few days later. A circular of instructions, "Measures to prevent the spread of infection from the bedside of a typhoid fever patient," the same being an excerpt from Public Health Bulletin No. 69, was also printed for distribution. The local druggists were advised to stock with quantities of chloride of lime, for which there was a heavy demand when the visiting nurse arrived and attendants on the sick were more carefully instructed in preventive measures.

Detailed Investigation.

Water supply.—All water at Gallup is from cased and sealed driven wells, from 400 to 1,561 feet deep, distribution being made by a municipally-owned piping system reaching all parts of the town.

Town well No. 1, 1,118 feet deep, contained 8 colon bacilli per cubic centimeter. A large underground concreted mixing cistern near by had a large crack in the bottom, through which water passed out from the filled cistern, or in from the supersaturated subsoil whenever the cistern had been nearly emptied by the force pump supplying the mains. An old, insaniary vault privy was located 50 feet from the cistern and 60 feet from the well. About 30 families lived on the steep, unsewered street immediately above the well and cistern. The log of the well shows the first 75 feet to be "wash, with streaks of sand."

Milk supply.—Gallup has one principal dairy, A, which supplied 186 households. It delivered milk to private families in bottles, and to two soda fountains, X and Y, in cans. Its customers included several boarding houses and small restaurants. Milk was furnished by 13 cow owners, in small amounts, to 84 other families, while 6 owners supplied themselves only. There are about 425 households in the town, of which the remaining 149, comprising the poorer people, used no fresh milk.

Soda fountain X dispensed ice cream purchased in Albuquerque, but sold milk shakes and malted milk made with raw milk from dairy A. Soda fountain Y sold milk shakes and also made its own ice cream, mixing milk from dairy A with cream shipped in from a Colorado town. This ice cream was sold over the counter and was marketed at Holbrook, Ariz. It was also peddled on the streets of Gallup and at five near-by mine towns, the largest of which, Allison, has an estimated population of 560. None of these mine towns received milk from dairy A in any other way, nor did they use Gallup water.

Sewage disposal.—The municipal sewer ramifies to all major parts of town and discharges about one-half mile below into the Puercos, which is a dry arroyo part of the year and a considerable stream only after rains. Unscreened, uncleaned privies of primitive type are in common use and are found throughout all parts of the town. Some overhang the Puercos, which also receives the surface wash from both hillsides on which the town is built as well as the effluent from a sewer from the Atchison, Topeka & Santa Fe roundhouse and shop near the upper end of town. A privately owned sewer drains about a dozen houses on the south side of the Puercos and discharges one-fourth mile above the municipal sewer outlet. In the sand of the Puercos children play, and to the course of the stream for several miles below the town cows have free access. Through the Puercos, below the sewer outlets, thousands of sheep are driven to the railway's shipping pens located on the bank at this point. Dairy A, located $2\frac{1}{2}$ miles below the sewer outlet, is usually protected from floods in the Puercos by the railroad embankment, which extends

down the left bank past the farm, but the flood above-mentioned had dammed the Allison branch line railroad bridge, and the Puercos, thus diverted, had carried away about 200 yards of the main-line embankment and swept waist deep over the dairy premises. This same torrential downpour flooded many privy vaults in town and swept their dissolved contents down both hillsides into the flood, which thus contained representative fecal contamination from all parts of the town, both sewered and unsewered.

Sanitary History of the Town.

In New Mexico deaths, births, and disease are not regularly reported. Burial permits are not required, nor is the calling of a physician mandatory in any case. Gallup is no exception, but by careful inquiry among the physicians it was found that 10 cases of fever, 6 certainly and 4 probably typhoid, had occurred in town between February 25 and September 5. These pre-epidemic cases appeared to be unrelated to each other although 5 were in persons employed in or frequenting the railroad yards. Insanitary privies were used by all these patients, and during the first week of the disease, disinfection of excreta was usually omitted. Flies were plentiful until October.

The county health officer is paid only \$300 per annum, the usual salary in New Mexico, which sum seems to be intended for the care of patients at the county hospital. It does not appear that anyone is directly charged with the protection of the water or milk supply, or with any other sanitary duty. A casual inspection of dairy A would have shown evidences of the flood and pollution. An employee of this dairy was admitted to the county hospital, September 20, for typhoid, and the brother of another died of typhoid October 2. In the first 65 cases studied, 61 patients used this milk either as a beverage or on cereal. Mrs. J. nursed her son through an attack of typhoid fever, meanwhile waiting on table at a restaurant. Her privy, primitive, leaky, and foul, was only 150 feet from the leaky cistern near pump No. 1 and directly up the hill from that point. The milk-borne infection might easily have become water borne and hence more general. It was no one's business to detect and correct such gross lapses in sanitation. Not a cent of money was spent in prevention.

At this point in the investigation an improvised hypochlorite plant for treating the city water was introduced, the same being a modification of that described in Public Health Reports, October 9, 1914, pages 2709-2715, "The chemical disinfection of water," by Earle B. Phelps, professor of chemistry, Hygienic Laboratory.

TABLE 1.—Showing number of cases according to date of onset and relation to milk supply.

	Families supplied.	Feb. 25.	Mar. 5.	July.				August.				September.																
				13	14	23	25	27	1	5	11	18	19	20	21	22	23	24	25	26	27	28	30					
Dairy A.....	186	1	.....	.....	.....	.....	1	1	.....	.....	2	1	3	1	2	2	1	2	5	2	6	7	3
All other sources of fresh milk.....	90	.....	1	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
No fresh milk.....	149	.....	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unknown.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	1	1	.....				
		October.																								Total cases.		
		1	2	4	5	6	7	8	9	11	12	14	15	16	17	18	19	20	22									
Dairy A.....	7	4	6	4	3	2	4	2	2	1	1	1	1	2	2	2	2	1	1	79							
All other sources of fresh milk.....	1	4							
No fresh milk.....	3							
Unknown.....	2	2	1	10							

¹ Last of a series of floods, one of which inundated dairy A.² Holbrook, Ariz., cases. Ice cream from soda fountain Y. Date of onset approximate.³ Employed at dairy A and living on the place.⁴ Dairy A milk on home table.⁵ One patient had dairy A milk on home table.⁶ One patient was employed at dairy A and lived on the place.

Table 1 shows 96 cases of typhoid studied. There were undoubtedly others. Nine were pre-epidemic cases occurring between February 25 and September 5. Of the 87 epidemic patients, 76 consumed milk from dairy A. Of the 11 remaining, 2 were employed at the dairy and 3 others are known to have been on its route. The inference is permissible that these 5 patients used milk from this dairy, but only those who are definitely known to have done so are so charted. Of the remaining 6, 1 received milk from another dairy, but in bottles belonging to dairy A; 4 histories were not obtainable; 1 patient, a boy who frequently played in the Puercos, was definitely known not to have taken infected milk.

The epidemic cases traceable to dairy A gave the following history as to the manner in which milk was consumed:

As a beverage; this includes those taking milk shakes and malted milk from dairy A at soda fountains.....	60
On cereal and fruit or on bread and milk, but not as a beverage.....	9
In hot coffee only.....	¹ 1
In ice cream only.....	5
In ice cream and also hot coffee.....	1
Total.....	76

¹ This patient may have been infected by contact, as she sickened Oct. 11, having nursed her husband for typhoid since Sept. 19.

Ice Cream.

It is remarkable that only six cases were traceable to infected ice cream. This commodity, made with raw milk from dairy A, was sold extensively both in Gallup and at the mines until October 2. At the Allison mine alone from $7\frac{1}{2}$ to 10 gallons per week were sold, largely to children, but no case of fever appeared at this place.

One of these six cases was secondary to a previous one in the same house and may easily have been due to contact. Three were out of town cases reported by Dr. J. W. Bazell, superintendent of the board of health, Navajo County, Holbrook, Ariz., who believes that he excluded every source of infection except ice cream from Gallup, containing raw milk from dairy A, which these patients are known to have consumed.

The age distribution of cases, counting the entire series, was as follows:

Under 11 years.....	38
11 to 20 years.....	28
21 to 30 years.....	13
More than 30 years.....	17
Total.....	96

The usual frequency of multiple cases in the same household occurring about the same time, common in milk infections, was found, as follows:

- 2 cases in same house in 7 instances.
- 3 cases in same house in 4 instances.
- 4 cases in same house in 2 instances.

Other possible sources of infection were investigated with negative results. Ice, fruit, green vegetables, and shellfish were found unrelated to cases. In all, except the Holbrook cases, the patients drank the same water. Three cases at the Gibson mine, among persons frequently visiting Gallup, are included in the series.

Recommendations.

The final report, handed to the local authorities on October 26, contained the following recommendations:

1. Typhoid and other contagious diseases to be reported to the health officer and preventive measures taken in each case.
2. Dairy A to continue pasteurization permanently. All dairies to be frequently inspected.
3. All insanitary privies to be replaced by toilets with sewer connections, or by an approved type of privy.
4. All specifically infected privies to be cleaned and disinfected.
5. Thorough sanitation of the neighborhood of the infected well and cistern, and abandonment of the latter. Continue the hypo-

chlorite treatment of water supply until repeated tests of 30 cubic centimeters of raw water show absence of colon bacilli.

6. Fly-suppressive measures.

7. Free laboratory examination of suspected typhoid specimens.

8. Extension of sewer mains to unused sandy flats near by; and construction of filter beds well protected from floods and fenced.

Acknowledgments.

It is a pleasure to acknowledge the ready and thorough cooperation of all the physicians in Gallup, each one of whom gave valuable assistance in furnishing data for the study, and with unfailing courtesy.

PLAGUE-PREVENTION WORK.

LOUISIANA—NEW ORLEANS—PLAGUE ERADICATION.

The following report of plague-eradication work at New Orleans for the week ended January 1, 1916, was received from Surg. Creel, of the United States Public Health Service:

OUTGOING QUARANTINE.		LABORATORY OPERATIONS—continued.	
Vessels fumigated with sulphur.....	9	Rodents received by species—Continued.	
Vessels fumigated with carbon monoxide..	13	Mus alexandrinus.....	199
Vessels fumigated with cyanide gas.....	3	Mus musculus.....	5,902
Sulphur used, pounds.....	1,159	Wood rats.....	166
Coke consumed in carbon-monoxide fumigation, pounds.....	18,300	Musk rats.....	138
Cyanide used in cyanide-gas fumigation, pounds.....	96	Putrid (included in enumeration of species).....	64
Sulphuric acid used in cyanide-gas fumigation, pints.....	144	Total rodents received at laboratory.....	7,447
Clean bills of health issued.....	31	Rodents examined.....	2,210
Foul bills of health issued.....	3	Rats suspected of plague.....	25
		Plague rats confirmed.....	1
FIELD OPERATIONS.		PLAGUE RAT.	
Rodents trapped.....	8,273	Case No. 271:	
Premises inspected.....	5,559	Address, Elevator "E" (outside).	
Notices served.....	877	Captured Nov. 26, 1915.	
Garbage cans installed.....	23	Diagnosis confirmed, Dec. 28, 1915.	
		Treatment of premises, intensive trapping; elevation of loose material about the railroad yards.	
BUILDINGS RAT PROOFED.		PLAGUE STATUS TO JAN. 1, 1916.	
By elevation.....	86	Last case of human plague, Sept. 8, 1915.	
By marginal concrete wall.....	48	Last case of rodent plague, Dec. 28, 1915.	
By concrete floor and wall.....	120	Total number of rodents captured to Jan. 1.	559,643
By minor repairs.....	257	Total number of rodents examined to Jan. 1.	314,493
Total buildings rat proofed.....	511		
Concrete laid, square yards.....	10,988	Total cases of rodent plague to Jan. 1, by species:	
Premises, planking and shed flooring removed.....	116	Mus musculus.....	6
Buildings demolished.....	29	Mus rattus.....	18
Total buildings rat proofed to date (abated)	97,996	Mus alexandrinus.....	9
		Mus norvegicus.....	239
		Total rodent cases to Jan. 1, 1916....	272
LABORATORY OPERATIONS.			
Rodents received by species:			
Mus rattus.....	159		
Mus norvegicus.....	883		

HAWAII—HONOLULU—PLAGUE PREVENTION.

The following report of plague-prevention work at Honolulu for the week ended December 18, 1915, was received from Surg. Trotter, of the United States Public Health Service:

Total rats and mongoose taken.....	425	Classification of rats killed by sulphur dioxide:	
Rats trapped.....	358	<i>Mus alexandrinus</i>	2
Mongoose trapped.....	5	<i>Mus rattus</i>	16
Rats shot from trees.....	44	Average number of traps set daily.....	984
Rats killed by sulphur dioxide.....	18	Cost per rat destroyed.....	18½ cents
Examined microscopically.....	353	Last case rat plague, Aiea, 9 miles from Honolulu,	
Showing plague infection.....	0	Apr. 12, 1910.	
Classification of rats trapped:		Last case human plague, Honolulu, July 12, 1910.	
<i>Mus alexandrinus</i>	106	Last case rat plague, Hamakua Mill, Paauilo, Ha-	
<i>Mus norvegicus</i>	46	wail, Dec. 15, 1915.	
<i>Mus musculus</i>	173	Last case human plague, Paauhau Plantation,	
<i>Mus rattus</i>	33	tion, Hawaii, Dec. 16, 1915.	
Classification of rats shot from trees:			
<i>Mus alexandrinus</i>	32		
<i>Mus rattus</i>	12		

PORTO RICO—PLAGUE PREVENTION.

The following table shows the number of rats and mice examined in Porto Rico for plague infection during the three weeks ended December 24, 1915. No plague infection was found.

Place.	Rats.	Mice.
San Juan.....	205	21
Puerta de Tierra.....	179	16
Santurce.....	316	9

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CEREBROSPINAL MENINGITIS.

Arkansas Report for November, 1915.

During the month of November, 1915, cases of cerebrospinal meningitis were notified in Arkansas as follows: One each in Newton and Pulaski Counties.

City Reports for Week Ended Dec. 25, 1915.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Boston, Mass.....		1	Kansas City, Kans.....	1	
Buffalo, N. Y.....		1	Los Angeles, Cal.....	1	
Chelsea, Mass.....	1		New Orleans, La.....	1	1
Cleveland, Ohio.....		1	New York, N. Y.....	2	

DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 71.

ERYSIPELAS.

City Reports for Week Ended Dec. 25, 1915.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Boston, Mass.....		2	Newark, N. J.....	1	
Brookton, Mass.....	1		New York, N. Y.....		10
Buffalo, N. Y.....	4	3	Philadelphia, Pa.....	6	1
Cincinnati, Ohio.....	2		Pittsburgh, Pa.....	13	3
Cleveland, Ohio.....	7	1	Portland, Oreg.....	1	
Detroit, Mich.....	2	2	Reading, Pa.....	1	
Duluth, Minn.....	2		Sacramento, Cal.....	1	
Harrisburg, Pa.....	2		San Francisco, Cal.....	3	
Los Angeles, Cal.....	1		St. Louis, Mo.....	5	1
McKeesport, Pa.....	1		St. Paul, Minn.....	3	
Milwaukee, Wis.....	1		Wilkesburg, Pa.....	1	
Nashville, Tenn.....		1			

LEPROSY.

Hawaii Report for November, 1915.

During the month of November, 1915, 8 cases of leprosy were notified in Honolulu, Oahu Island, and one case was notified in Laha-ina District, Maui Island, Hawaii.

MALARIA.**Arkansas Report for November, 1915.**

During the month of November, 1915, 681 cases of malaria were notified in the State of Arkansas.

City Reports for Week Ended Dec. 25, 1915.

During the week ended December 25, 1915, malaria was reported by cities as follows: Dallas, Tex., one death; Richmond, Va., one case.

MEASLES.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 71.

PELLAGRA.**Arkansas Report for November, 1915.**

During the month of November, 1915, 52 cases of pellagra were notified in the State of Arkansas.

City Reports for Week Ended Dec. 25, 1915.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Beaver Falls, Pa.....	2	.....	Nashville, Tenn.....	.....	1
Birmingham, Ala.....	.....	1	New Orleans, La.....	2	2
Charleston, S. C.....	.....	5	Wilmington, N. C.....	.....	1
Chattanooga, Tenn.....	1	1			

PNEUMONIA.**City Reports for Week Ended Dec. 25, 1915.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Altoona, Pa.....	1	3	Lancaster, Pa.....	3	.....
Ann Arbor, Mich.....	2	2	Los Angeles, Cal.....	13	6
Binghamton, N. Y.....	3	.....	Manchester, N. H.....	6	6
Boston, Mass.....	.....	27	McKeesport, Pa.....	2	.....
Braddock, Pa.....	3	.....	Muscatine, Iowa.....	1	.....
Canton, Ohio.....	1	.....	New Castle, Pa.....	1	.....
Chattanooga, Tenn.....	3	5	Newport, Ky.....	2	2
Cleveland, Ohio.....	60	33	Norristown, Pa.....	2	.....
Dayton, Ohio.....	3	7	Pasadena, Cal.....	1	.....
Detroit, Mich.....	10	32	Philadelphia, Pa.....	220	141
Duluth, Minn.....	2	2	Pittsburgh, Pa.....	43	33
Erie, Pa.....	5	.....	Pittsfield, Mass.....	2	.....
Grand Rapids, Mich.....	2	2	Reading, Pa.....	7	1
Harrisburg, Pa.....	1	3	San Francisco, Cal.....	12	7
Kalamazoo, Mich.....	5	2	Schenectady, N. Y.....	1	1
Kansas City, Kans.....	1	.....	Steubenville, Ohio.....	1	.....
Kansas City, Mo.....	11	9	Toledo, Ohio.....	1	5
La Crosse, Wis.....	1	.....	York, Pa.....	1	.....

POLIOMYELITIS (INFANTILE PARALYSIS).**Arkansas Report for November, 1915.**

During the month of November, 1915, one case of poliomyelitis was notified in Hot Springs County, Ark.

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.**City Reports for Week Ended Dec. 25, 1915.**

During the week ended December 25, 1915, one case of poliomyelitis was reported at Boston, Mass., and one case at Cleveland, Ohio.

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 71.

SMALLPOX.**Minnesota.**

Collaborating Epidemiologist Bracken reported by telegraph that during the week ended January 8, 1916, several new foci of smallpox infection were reported in Minnesota, cases of the disease having been notified as follows: Brown County, Sleepy Eye, 4; Dakota County, Burnsville Township, 1; Hennepin County, Minnetrista Township, 1; Hubbard County, Hubbard Township, 1; Jackson County, Lakefield, 1; Lyon County, Shelburne Township, 1, Rock-lake Township, 1; Redwood County, Swedesforest Township, 1; Scott County, Credit River Township, 7.

South Carolina—Princeton.

Collaborating Epidemiologist Hayne reported by telegraph January 7, 1916, that 37 cases of smallpox, with 1 death, had been notified in Princeton and vicinity, Laurens County, S. C.

Miscellaneous State Reports.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Arkansas (Nov. 1-30):			Arkansas (Nov. 1-30)—Contd.		
Counties—			Counties—continued.		
Garland.....	4	.....	White.....	1	.....
Greene.....	5	.....	Woodruff.....	1	.....
Monroe.....	4	.....	Cleburne.....	44	.....
Phillips.....	1	.....	Total.....	64	.....
Pulaski.....	1	.....		
Washington.....	3	.....		

City Reports for Week Ended Dec. 25, 1915.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Charleston, S. C.....	1	.....	Lynchburg, Va.....	1	.....
Danville, Ill.....	2	.....	Milwaukee, Wis.....	2	.....
Davenport, Iowa.....	4	.....	New Orleans, La.....	2	.....
Detroit, Mich.....	3	.....	Oklahoma City, Okla.....	7	.....
Evansville, Ind.....	9	.....	Pittsburgh, Pa.....	2	.....
Everett, Wash.....	1	.....	Saginaw, Mich.....	1	.....
Lincoln, Nebr.....	3	.....	Springfield, Ill.....	17	.....
Los Angeles, Cal.....	1	.....		

TETANUS.

City Reports for Week Ended Dec. 25, 1915.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
McKeesport, Pa.	1	Orange, N. J.	1	.....
Mobile, Ala.	1	St. Louis, Mo.	1	.....
New York, N. Y.	1	Wilmington, N. C.	.....	3

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 71.

TYPHOID FEVER.

Louisiana—Lake Charles.

Surg. von Ezdorf reported that since October 1, 1915, 168 cases of typhoid fever, with 12 deaths, have been reported at Lake Charles, La. Fifteen of these cases and 2 of the deaths occurred at West Lake, a suburb of Lake Charles.

State Reports for November, 1915.

Place.	New cases reported.	Place.	New cases reported.
Arkansas:		Arkansas—Continued.	
Ashley County.....	4	Polk County.....	6
Bradley County.....	2	Scott County.....	7
Carroll County.....	1	Sevier County.....	2
Clay County.....	5	St. Francis County.....	1
Columbia County.....	6	Washington County.....	14
Drew County.....	1	Woodruff County.....	2
Faulkner County.....	1	Total.....	88
Greene County.....	5		
Hempstead County.....	5	Hawaii:	
Hot Springs County.....	2	Maul—	
Izard County.....	3	Puunene and Kihei Districts.....	2
Lafayette County.....	4	Oahu—	
Lawrence County.....	2	Honolulu.....	1
Logan County.....	3	Waialua District.....	2
Newton County.....	6	Total.....	5
Perry County.....	2		
Phillips County.....	4		

City Reports for Week Ended Dec. 25, 1915.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	1	1	Galveston, Tex.....	2	.....
Baltimore, Md.....	20	3	Grand Rapids, Mich.....	1	.....
Binghamton, N. Y.....	5	.....	Harrisburg, Pa.....	1	.....
Birmingham, Ala.....	3	.....	Indianapolis, Ind.....	13	1
Boston, Mass.....	1	.....	Jersey City, N. J.....	1	.....
Braddock, Pa.....	1	.....	Johnstown, Pa.....	2	2
Buffalo, N. Y.....	7	1	Kalamazoo, Mich.....	1	.....
Charleston, S. C.....	.....	1	Lancaster, Pa.....	1	1
Cincinnati, Ohio.....	3	.....	Lawrence, Mass.....	.....	1
Columbus, Ohio.....	1	.....	Lincoln, Nebr.....	7	.....
Cumberland, Md.....	2	.....	Lowell, Mass.....	3	.....
Dallas, Tex.....	1	.....	Madison, Wis.....	1	.....
Danville, Ill.....	6	.....	Malden, Mass.....	1	.....
Dayton, Ohio.....	4	1	Milwaukee, Wis.....	1	.....
Detroit, Mich.....	6	2	Mobile, Ala.....	2	.....
Erie, Pa.....	1	.....	Nashville, Tenn.....	3	.....
Fall River, Mass.....	11	3	Newark, N. J.....	1	.....

TYPHOID FEVER—Continued.**City Reports for Week Ended Dec. 25, 1915—Continued.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
New Bedford, Mass.	1	.....	Somerville, Mass.	1	.....
New Orleans, La.	2	1	Spring field, Mass.	1	.....
New York, N. Y.	21	2	Steubenville, Ohio.	5	.....
Oakland, Cal.	1	2	Superior, Wis.	.....	1
Orange, N. J.	1	.....	Syracuse, N. Y.	2	.....
Philadelphia, Pa.	15	3	Tacoma, Wash.	1	.....
Pittsburgh, Pa.	10	2	Toledo, Ohio.	7	2
Portland, Oreg.	3	1	Washington, D. C.	2	.....
Richmond, Va.	1	1	Wheeling, W. Va.	1	.....
St. Louis, Mo.	8	1	Wilmington, Del.	.....	1
St. Paul, Minn.	3	1	Wilmington, Del.	4	2
Salt Lake City, Utah.	3	.....	Woburn, Mass.	.....	1
Schenectady, N. Y.	1	.....		

TYPHUS FEVER.**Texas—Laredo.**

Acting Asst. Surg. Hamilton reported that 2 cases of typhus fever were notified at Laredo, Tex., January 6, 1916, making a total of 5 cases recently reported at that place.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.**State Reports for November, 1915.**

During the month of November, 1915, 95 cases of diphtheria, 3 cases of measles, and 21 cases of scarlet fever were notified in the State of Arkansas; and 1 case of diphtheria, 390 cases of measles, and 1 case of scarlet fever were notified in the Territory of Hawaii.

City Reports for Week Ended Dec. 25, 1915.

City.	Popula- tion as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	584,605	204	36	4	117	1	20	.....	20	24
Boston, Mass.	745,139	242	49	4	50	2	45	1	26	18
Cleveland, Ohio.	656,975	192	56	1	97	1	48	5	23	17
Detroit, Mich.	554,717	215	41	3	56	3	22	2	14	11
New York, N. Y.	5,468,100	1,724	270	26	204	5	108	1	310	146
Philadelphia, Pa.	1,683,664	834	79	12	39	1	30	.....	75	42
Pittsburgh, Pa.	571,984	238	27	4	94	.....	18	.....	15	12
St. Louis, Mo.	745,988	226	127	6	7	.....	16	.....	21	15
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.	461,335	121	28	.....	364	2	14	.....	22	12
Cincinnati, Ohio.	406,706	117	17	1	21	.....	12	1	20	10
Jersey City, N. J.	300,133	79	20	2	2	.....	14	.....	21	9
Los Angeles, Cal.	465,367	105	16	.....	1	.....	9	.....	23	15
Milwaukee, Wis.	428,062	160	18	4	210	1	3	1	17	8
Newark, N. J.	394,000	119	18	.....	152	.....	7	.....	72	.....
New Orleans, La.	366,484	153	82	5	.....	.....	1	.....	28	16
San Francisco, Cal.	*416,912	138	20	1	.....	.....	21	1	25	22
Seattle, Wash.	330,834	53	.....	.....	4	.....	.....	.....	6	2
Washington, D. C.	338,679	155	67	1	10	.....	23	.....	10	20

* Population April 15, 1910; no estimate made.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Dec. 25, 1915—Continued.

City.	Population as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria		Measles.		Scarlet fever.		Tuberculosis.		
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
From 200,000 to 300,000 inhabitants:											
Columbus, Ohio.....	209,722	70	6				11		7		
Indianapolis, Ind.....	265,578	81	3		2		13		8		
Kansas City, Mo.....	287,879		14	1			3	1	2		
Portland, Oreg.....	272,833	51	8		3		3		9		
Providence, R. I.....	250,025	64	20	2	2		15				
Rochester, N. Y.....	250,747	73	2	1	12		4		8		
St. Paul, Minn.....	241,999	63	2		5		12		7		
From 100,000 to 200,000 inhabitants:											
Albany, N. Y.....	103,580		1		33		2		3		
Birmingham, Ala.....	174,108	50	2		1		1		6		
Bridgerfort, Conn.....	118,434	43	10		3		5	1	3		
Cambridge, Mass.....	111,669	22	5		4		5		7		
Dallas, Tex.....	116,605		8	1			6				
Dayton, Ohio.....	125,509	59	5	1	1		16	1	3		
Fall River, Mass.....	126,504		7	1	1				12		
Grand Rapids, Mich.....	125,759	28	1						3		
Hartford, Conn.....	108,469	34	3		8		2		5		
Lowell, Mass.....	112,124	34	11				3		5		
Lynn, Mass.....	100,316	18	4	2	40		16				
Nashville, Tenn.....	115,478	30	4				5		1		
New Bedford, Mass.....	114,694	37	5	2	4		1		5		
New Haven, Conn.....	147,055				2		5		3		
Oakland, Cal.....	170,803		2	1			6		7		
Reading, Pa.....	105,074	26	1		124	2	2		1		
Richmond, Va.....	154,674	65	3		1		2		8		
Salt Lake City, Utah.....	113,567	24	1	2	1		1		1		
Springfield, Mass.....	103,216	41	1		2		3		3		
Syracuse, N. Y.....	152,534	36	3	1					4		
Tacoma, Wash.....	108,094						1				
Toledo, Ohio.....	187,840	58	13	1	61		12		3		
Trenton, N. J.....	169,212	44	14	1	122	2	1		5		
From 50,000 to 100,000 inhabitants:											
Akron, Ohio.....	82,678	28	5		1		21				
Altoona, Pa.....	57,606	10	3				1				
Bayonne, N. J.....	67,582	27	1						4		
Berkeley, Cal.....	54,879	16					3				
Binghamton, N. Y.....	53,082	18	1		1		1		3		
Brockton, Mass.....	65,746	8	3		1		1				
Canton, Ohio.....	59,139	13	5		8		13				
Charleston, S. C.....	60,427	40									
Chattanooga, Tenn.....	58,576		3				1		1		
Duluth, Minn.....	91,913	35			1		3		4		
Erie, Pa.....	73,798	19	2		2		1		2		
Evansville, Ind.....	72,125				1		1		1		
Harrisburg, Pa.....	70,754	20	1						5		
Hoboken, N. J.....	76,104	25	3	1	3		3		2		
Johnstown, Pa.....	66,585	23	2		20		1		1		
Kansas City, Kans.....	96,851		5				5	1	3		
Lancaster, Pa.....	50,269		3								
Lawrence, Mass.....	98,197	23	6		27		3		4		
Little Rock, Ark.....	55,158	10	3						1		
Malden, Mass.....	50,067	12	4		2		3		2		
Manchester, N. H.....	76,959	13	1		1		3				
Mobile, Ala.....	56,536	29	1				2				
New Britain, Conn.....	52,203		3		1						
Oklahoma, Okla.....	88,158	13	5				3				
Passaic, N. J.....	69,010				18		1		1		
Sacramento, Cal.....	64,806	19									
Saginaw, Mich.....	54,815	18					2		1		
San Diego, Cal.....	51,115	24	3	1			5		3		
Schenectady, N. Y.....	95,215	16	2		5		5		14		
Somerville, Mass.....	85,460	21	8	1	3		7		1		
South Bend, Ind.....	67,030	18	7	1			1				
Springfield, Ill.....	59,468		14	1			4				
Springfield, Ohio.....	50,804	20	6	2			1		2		
Troy, N. Y.....	77,738		2				7				
Wilkes-Barre, Pa.....	75,218	19	5		3		8				
Wilmington, Del.....	93,161	51	1	1	2		3				
York, Pa.....	50,543		2				2		1		

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Dec. 25, 1915—Continued.

City.	Population as of July 1, 1915 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabitants:										
Alameda, Cal.	27,031	8					1			
Butler, Pa.	25,587	6								1
Chelsea, Mass.	*32,452	20	4		18	1	4		2	
Chicopee, Mass.	28,688	6	2				1		5	
Cumberland, Md.	25,564	7								
Danville, Ill.	31,551	11	1						1	
Davenport, Iowa	47,127	1	1				1			
East Orange, N. J.	41,155	7	5		13		1		1	
Elgin, Ill.	27,844	7					3			
Everett, Mass.	38,307	7	1		3				4	1
Everett, Wash.	33,767	4								
Fitchburg, Mass.	41,144	12	9				2		1	2
Galveston, Tex.	41,076	20	1							2
Haverhill, Mass.	47,774	10	6				3		1	
Kalamazoo, Mich.	47,364	15							3	1
Kenosha, Wis.	30,319		1							
La Crosse, Wis.	31,522	7			5				3	
Lexington, Ky.	39,703	8	1				1			1
Lincoln, Nebr.	16,028	9			1		2		2	2
Lorain, Ohio.	35,662				2		17			
Lynchburg, Va.	32,385	5	2				1			
Madison, Wis.	30,084		3		28					
McKeesport, Pa.	46,743	11	3				1			
Medford, Mass.	25,737	9								
Montclair, N. J.	25,550	6							3	
New Castle, Pa.	40,351		8		1		1			
Newport, Ky.	31,722	9								1
Newton, Mass.	43,085	15			3		1		1	1
Niagara Falls, N. Y.	36,240	8			1		2			
Norristown, Pa.	30,833	5	1							
Orange, N. J.	32,524	14	1		1		3		1	2
Pasadena, Cal.	43,859	11							2	1
Perth Amboy, N. J.	39,725		5						1	
Pittsfield, Mass.	37,580	7	5						2	
Portsmouth, Va.	38,610	14								1
Racine, Wis.	45,507	11	1							
Roanoke, Va.	41,929	13	7	2			2		2	
Steubenville, Ohio.	26,631	12								
Stockton, Cal.	34,508	9								3
Superior, Wis.	45,285	8	1				1			
Taunton, Mass.	35,957	11			14	1			1	
Waltham, Mass.	30,129	8	4							
West Hoboken, N. J.	41,893								2	
Wheeling, W. Va.	43,097	11			6			1		2
Williamsport, Pa.	33,495	10								
Wilmington, N. C.	28,261	19								3
Zanesville, Ohio.	30,406		1							
From 10,000 to 25,000 inhabitants:										
Ann Arbor, Mich.	14,979	11	1				1		1	1
Beaer Falls, Pa.	13,316		2		43		1			
Braddock, Pa.	21,310				14					
Cairo, Ill.	15,593	7								1
Clinton, Mass.	*13,075	7								
Coffeyville, Kan.	16,765		4	1	1					
Concord, N. H.	22,480	11								2
Galesburg, Ill.	23,923	4					1			
Harrison, N. J.	16,555		2						2	
Kearny, N. J.	22,753	8			1					
Melrose, Mass.	17,166	5					1			
Morristown, N. J.	13,158	3	1				1			
Muscatine, Iowa	17,287	10								
Nanticoke, Pa.	22,441	7	1							
Newburyport, Mass.	15,195	4	1		1					1
New London, Conn.	20,771	8	5	1						1
North Adams, Mass.	*22,019	5	2	1					1	1
Northampton, Mass.	19,846		1						2	
Painfield, N. J.	23,280		2		7		1			1
Rutland, Vt.	14,624	5								
Saratoga Springs, N. Y.	12,842	6			4				2	
Steelton, Pa.	15,337	6							4	1
Wilkesburg, Pa.	22,361	9	1		4		1			
Woburn, Mass.	15,862	4								

*Population April 15, 1910; no estimate made.

FOREIGN.

CANARY ISLANDS.

Smallpox Epidemic—Grand Canary.

Smallpox was reported present in epidemic form on the island of Grand Canary, Canary Islands, November 23, 1915.

CHINA.

Examination of Rats—Shanghai.

During the week ended November 27, 1915, 252 rats were examined at Shanghai. No plague infection was found.

EGYPT.

Plague.

During the period from November 27 to December 1, 1915, inclusive, 6 fatal cases of plague were notified in the province of Minieh, Egypt. Of these, 5 cases were of the pneumonic form.

GIBRALTAR.

Quarantine Against Ceuta and Tetuan Removed.

The quarantine restrictions imposed at Gibraltar September 1 and 3, 1915,¹ against Ceuta and Tetuan, Morocco, were removed December 1, 1915, by order of the board of health.

INDIA.

Plague—Madras Presidency, 1898-1915.

During the period from August 1, 1898, to June 30, 1915, 141,356 cases of plague with 109,095 deaths were notified in the Madras Presidency.

CHOLERA, PLAGUE, SMALLPOX, AND TYPHUS FEVER.

Reports Received During Week Ended Jan. 14, 1916.²

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary.....				Total, Oct. 25-Nov. 1, 1915: Cases, 107; deaths, 36.
Austria.....	Oct. 25-31.....	10	7	
Croatia-Slavonia.....	Oct. 25-Nov. 1.....	97	29	
India:				
Calcutta.....	Oct. 31-Nov. 13.....		27	
Penzance.....	Oct. 7-30.....		1	
Madras.....	Nov. 7-20.....	3		
Mandalay.....	Oct. 24-30.....		21	
Mergui.....	Oct. 23-30.....		7	
Myingyan.....	Oct. 10-Nov. 6.....		10	
Pao u.....	Oct. 10-Nov. 6.....		45	
Rangoon.....	Nov. 7-13.....	14	14	
Toungoo.....	Oct. 7-Nov. 6.....		40	

¹ Public Health Reports, Oct. 8, 1915, p. 3027.

² From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, AND TYPHUS FEVER—Continued.**Reports Received During Week Ended Jan. 14, 1916—Continued.****PLAGUE.**

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon:				
Colombo.....	Oct. 24-Nov. 13...	9	9	
China:				
Tong'ong.....	Nov. 7-20.....	2	2	
Egypt:				
Minieh, province.....	Nov. 27-Dec. 1....	6	6	
Port Said.....	Aug. 13-26.....	2	2	
India.....				Oct. 31-Nov. 13: Cases, 8,164; deaths, 6,024.
Bombay.....	Nov. 9-20.....	9	12	
Karachi.....	Nov. 7-20.....	2	2	
Madras.....	Oct. 16-29.....		74	Madras presidency, Aug. 1, 1898, to June 30, 1915: Cases, 141,356; deaths, 109,095.
Mandalay.....	Oct. 24-Nov. 6.....		11	
Rangoon.....	Nov. 7-13.....	7	5	
Straits Settlements:				
Singapore.....	Oct. 31-Nov. 6....	2	2	

SMALLPOX.

Austria-Hungary:				
Hungary—				
Budapest.....	Nov. 21-27.....	205		
Canada:				
Ontario—				
Fort William and Port Arthur.....	Dec. 19-25.....	1		
Quebec—				
Montreal.....	Dec. 19-25.....	1		
Canary Islands:				
Grand Canary.....	Nov. 23.....			Epidemic.
Ceylon:				
Colombo.....	Oct. 24-Nov. 13...	6	2	
China:				
Nanking.....	Nov. 21-27.....			Present.
Egypt:				
Cairo.....	Sept. 3-16.....	2		
Germany:				
Oppeln, Govt. district.....	Nov. 21-27.....	1		
Saxony.....	Nov. 21-27.....	1		
India:				
Bombay.....	Nov. 7-20.....	5	1	
Calcutta.....	Nov. 7-13.....		1	
Madras.....	Nov. 7-20.....	13	7	
Rangoon.....	Nov. 7-13.....	1		
Mexico:				
Aguascalientes.....	Dec. 20-26.....	5		
Frontera.....	Nov. 21-Dec. 4....	34	10	
Guadalajara.....	Dec. 5-11.....	3		
Hermosillo.....	Dec. 12-25.....	38	6	
Progreso.....	Dec. 5-18.....	2		
Tampico.....	Dec. 7-20.....		11	
Vera Cruz.....	Dec. 13-26.....	21	24	
Portugal:				
Lisbon.....	Dec. 5-9.....	3		
Spain:				
Madrid.....	Nov. 1-30.....		22	
Valencia.....	Nov. 21-Dec. 4....	80	1	
Switzerland:				
Basel.....	Nov. 29-Dec. 4....	7		
Turkey in Asia:				
Beirut.....	Oct. 10-30.....	12	6	
Union of South Africa:				
Johannesburg.....	Oct. 17-23.....	2		

CHOLERA, PLAGUE, SMALLPOX, AND TYPHUS FEVER—Continued.**Reports Received During Week Ended Jan. 14, 1916—Continued.****TYPHUS FEVER.**

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Antung.....	Nov. 29-Dec. 5....	1		
Egypt:				
Alexandria.....	Nov. 12-18.....	1	1	
Cairo.....	Aug. 13-Sept. 2....	15	12	
Germany:				
Berlin.....	Nov. 21-27.....		3	
Hanover.....	.....do.....	1	1	
Königsberg.....	Nov. 28-Dec. 4....	1	2	
Stettin.....	Dec. 5-11.....		1	
Great Britain:				
Liverpool.....	Dec. 12-18.....	2	1	
Greece:				
Saloniki.....	Nov. 7-27.....		93	
Mexico:				
Aguascalientes.....	Dec. 20-26.....		4	
Russia:				
Vladivostok.....	Oct. 8-21.....	10		
Spain:				
Madrid.....	Nov. 1-30.....		1	
Turkey in Asia:				
Mersina.....	Nov. 21-27.....	3		

Reports Received from Jan. 1 to 7, 1916.¹**CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Croatia-Slavonia.....	Oct. 18-24.....	5	3	
Hungary.....	.....do.....	16	11	
Borneo:				
Putatan.....	Oct. 17-23.....	2		
India:				
Rangoon.....	Oct. 31-Nov. 6....	11	10	
Indo-China:				
Saigon.....	Oct. 25-31.....	1	1	
Java.....				Oct. 15-Nov. 8: Cases, 55; deaths, 38.
Batavia.....	Oct. 26-Nov. 8....	40	28	
Brebes.....	Oct. 15-28.....	6	6	

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia.....	Nov. 21-Dec. 11...	8	4	
India:				
Rangoon.....	Oct. 31-Nov. 6....	10	11	
Indo-China:				
Saigon.....	Oct. 25-Nov. 13...	7	4	
Java.....				Oct. 22-Nov. 4, 1915: Cases, 293; deaths, 277.
Kediri residency.....	Oct. 22-Nov. 4....	137	129	
Madison residency.....	.....do.....	1	1	
Paseroean residency.....	.....do.....	6	8	
Surabaya residency.....	.....do.....	2	2	
Surakarta residency.....	.....do.....	147	137	
Russia:				
Siberia—				
Transbaikalian Province..	Oct., 1914.....	16	13	

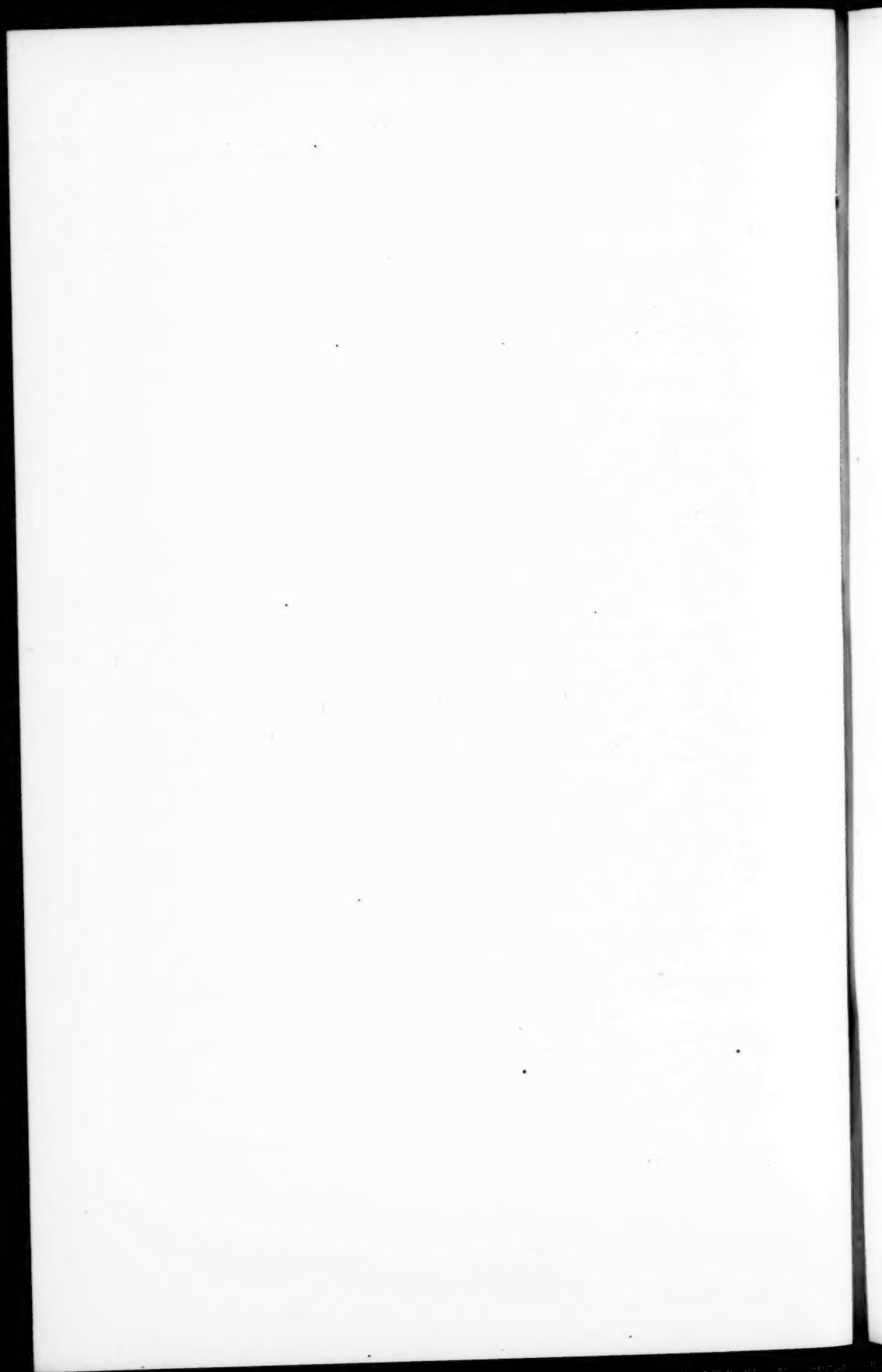
¹ From medical officers of the Public Health Service, American consuls, and other sources. For reports received from June 20 to Dec. 31, 1915, see PUBLIC HEALTH REPORTS for Dec. 31, 1915. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.

CHOLERA, PLAGUE, SMALLPOX, AND TYPHUS FEVER—Continued.**Reports Received from Jan. 1 to 7, 1916—Continued.****SMALLPOX.**

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Nanking.....	Nov. 7-13.....			Present.
India:				
Rangoon.....	Oct. 31-Nov. 6....	2	1	
Italy:				
Turin.....	Nov. 22-Dec. 5....	6		
Java.....				Oct. 15-Nov. 8: Cases, 194; deaths, 39.
Batavia.....	Nov. 1-8.....	5	3	
Mexico:				
Aguascalientes.....	Dec. 13-19.....		7	
Russia:				
Petrograd.....	Oct. 24-Nov. 13...	57	13	
Riga.....	Nov. 14-20.....	1		Aug. 1-31, 1915: Cases, 10; deaths, 1.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Antung.....	Nov. 22-28.....	1		
Germany:				
Lübeck.....	Nov. 7-20.....	3	1	
Great Britain:				
Liverpool.....	Dec. 5-11.....	1	1	
Italy:				
Florence.....	Oct. 1-30.....	20	2	
Java.....				Oct. 15-Nov. 8, 1915: Cases, 30; deaths, 11.
Batavia.....	Oct. 26-Nov. 8....	1	1	
Samarang.....	Oct. 22-28.....	2		
Mexico:				
Aguascalientes.....	Dec. 13-19.....		4	
Mexico City.....	Dec. 23.....			Prevalent.
Russia:				
Petrograd.....	Oct. 24-Nov. 13...	8	1	
Riga.....	Nov. 14-20.....	12		



SANITARY LEGISLATION.

COURT DECISIONS.

UNITED STATES SUPREME COURT.

Illinois Pure Food Law Held to Prohibit the Use of Boric Acid in a Preservative Sold for Use in Foodstuffs.

PRICE v. STATE OF ILLINOIS, 35 Sup. Ct. Rep., 892. (June 21, 1915.)

A State has power to protect the health of its people and to impose restrictions having reasonable relation to that end. The nature and extent of restrictions of this character are matters for the legislative judgment in defining the policy of the State and the safeguards required.

The Illinois law prohibiting the use of boric acid in food is valid.

The Illinois pure food law prohibits the sale of food containing added poisonous or other deleterious substances and declares boric acid to be unwholesome and injurious. Another section of the law prohibits the sale of any unwholesome or injurious preservative intended for use in foods. The defendant sold in Illinois a compound containing boric acid, which was intended for use as a preservative of canned fruit and vegetables. The State court construed the law to prohibit the use of boric acid in a preservative although such preservative was not a food in itself and was not shown to be injurious or unwholesome, and the Supreme Court of the United States adopted this construction.

The preservative was not sold in the "original package," and therefore the power of the State was not affected by the Federal Constitution or laws.

Mr. Justice HUGHES delivered the opinion of the court:

This is a writ of error to review a judgment of the supreme court of Illinois, which affirmed a judgment of the municipal court of Chicago, finding the plaintiff in error guilty of a violation of the "pure food" statute of that State, and imposing a fine. (257 Ill., 587; 101 N. E., 196, Ann. Cas., 1914A, 1154.)

The violation consisted of a sale in Chicago of a preservative compound known as "Mrs. Price's Canning Compound," alleged to be intended as a "preservative of food," and to be "unwholesome and injurious in that it contained boric acid."

The statute (Laws of Illinois, 1907, p 543; Hurd's Rev. Stat., chap. 127b, secs. 8 and 22) provides:

"SEC. 8. Defines Adulteration. That for the purpose of this act an article shall be deemed to be adulterated: * * *

"In case of food: * * *.

"Fifth.—If it contains any added poisonous or other added deleterious ingredient which may render such article injurious to health: *Provided*, That when in the preparation of food products for shipment they are preserved by an external application, applied in such a manner that the preservative is necessarily removed mechanically, or by maceration in water, or otherwise, and directions for the removal of said preservatives shall be printed on the covering of the package, the provisions of this act shall be construed as applying only when such products are ready for consumption; and formaldehyde, hydrofluoric acid, boric acid, salicylic acid and all compounds and derivatives thereof are hereby declared unwholesome and injurious. * * *

"SEC. 22. Sale of Preservatives Prohibited. No person, firm or corporation shall manufacture for sale, advertise, offer or expose for sale, or sell, any mixture or compound intended for use as a preservative or other adulterant of milk, cream, butter or cheese, nor shall he manufacture for sale, advertise, offer or expose for sale, or sell any unwholesome or injurious preservative or any mixture or compound thereof intended

as a preservative of any food: *Provided, however*, That this section shall not apply to pure salt added to butter and cheese."

A trial by jury was waived. There was a stipulation of facts setting forth, in substance, that the defendant had sold in Chicago two packages of the preservative in question; that the compound contained "boric acid"; that the label on the packages bore the following statement: "It is not claimed for this compound that it contains anything of food value, but it is an antiseptic preparation, and among its many uses may be employed to prevent canned fruits and vegetables from souring and spoiling"; that the preservative was not offered for sale or sold in any food product, but only separately as a preservative; and that the defendant was accorded a hearing before the State Food Commission pursuant to the provisions of the food law.

There was also introduced in evidence on behalf of the State an envelop, used for inclosing the compound, upon which were statements as to its uses, prices, etc. It was thus stated that the preservative could be used "in canning all kinds of fruit," and was "especially valuable for corn, beans, peas," etc. There was also the statement on the envelop that the contents "of this package" were sufficient for "four quarts," and that the retail prices were from 10 cents for one "package" to \$1 for fifteen "packages." That was the case for the State.

A motion to dismiss was denied. The plaintiff then made an offer of proof, and thereupon it was stipulated that a witness in court, if sworn, would testify that the "Price Canning Compound is an article of commerce, which has been sold under that distinct name for a period of years, with the ingredients and in the proportions contained in the sample taken by the Food Department, which is the subject of this suit; that it has acquired a wide reputation over a large number of States in the Union as a distinctive article, used for canning by the housewife"; that "it is not sold to manufacturers of food or canners of food for sale"; and that "boric acid is a constituent part of the compound and has been such during all the time that the compound has been sold."

Objection to evidence offered that "there is no added ingredient of any kind whatever, whether it be injurious, deleterious, or otherwise," was sustained as not being addressed to the charge made. The defendant (the plaintiff in error) also offered to prove "that boric acid is not injurious to health or to the human system," and that the "Price Canning Compound is not adulterated or mislabeled in any way." The offer was rejected and the defendant excepted. In response to a further offer it was conceded that the witness, if placed upon the stand, would testify that the compound "is an article of commerce, sold in Illinois in the original package manufactured in Minnesota."

Upon this state of the record the contention of the plaintiff in error that the statute was inapplicable, or, if applicable, was repugnant to the constitution of the State and to the commerce clause and the fourteenth amendment of the Federal Constitution, was overruled.

The supreme court of the State thus construed the statute:

"We will first notice the objection of plaintiff in error that section 8 deals only with foods; that the declaration in that section that boric acid is injurious and unwholesome is limited to foods containing that substance as an added ingredient, and has no application to a preservative which is not, and does not purport to be, a food.

"Both sections 8 and 22 are parts of one act, and the act as a whole should be so construed as to give effect to its manifest purpose and intent. Its main purpose is to protect health by preventing adulteration of food by any unwholesome and injurious ingredient. Boric acid is declared to be unwholesome and injurious, and the sale of any food to which it is an added ingredient is prohibited. It was well known to the legislature that various compounds are manufactured and sold for preserving foods of different kinds. If such preservatives contain unwholesome and injurious ingredients, their use by the housewife, or anyone else, in preserving fruits or food, would be as injurious to the health as if they had been added by a dealer or manufacturer

to fruits or other foods before placing them on the market. The object of the act is to protect the public health by preventing dealers from selling food to which had been added, for the purpose of preserving it, ingredients injurious to the health, or from selling any compound as a preservative which contained any such ingredients. The prohibition is not against the sale of all preservatives, but is against only unwholesome or injurious preservatives. * * * It is just as important to prohibit the sale to the housewife of a compound containing boric acid to be used by her to preserve fruits and vegetables put up by her for family use as it is to prohibit the sale of fruits and vegetables after such an ingredient has been added. We think the reasonable construction of the act to be that the prohibition against boric acid is not limited to foods to which it is an added ingredient, but extends to compounds sold as a food preservative which contain boric acid. The danger to health is as great from one as the other, and the prohibition of both was necessary to effect the evident purpose of the legislature." (257 Ill., pp. 592, 593.)

The plaintiff in error challenges the correctness of this construction, but this question is simply one of local law with which we are not concerned. We accept the decision of the supreme court of the State as to the meaning of the statute, and, in the light of this construction, the validity of the act under the Federal Constitution must be determined. (*Missouri P. R. Co. v. Nebraska*, 164 U. S., 403, 414, 41 L. ed., 489, 494, 17 Sup. Ct. Rep., 130; *W. W. Cargill Co. v. Minnesota*, 180 U. S., 452, 466, 45 L. ed., 619, 925, 21 Sup. Ct. Rep., 423; *Lindsley v. Natural Carbonic Gas Co.*, 220 U. S., 61, 73, 55 L. ed., 369, 375, 31 Sup. Ct. Rep., 337, Ann. Cas., 1912C, 160; *Purity Extract Tonic Co. v. Lynch*, 226 U. S., 192, 198, 57 L. ed., 184, 186, 33 Sup. Ct. Rep., 44.)

The first Federal question is presented by the contention that the statute, as applied, effects a deprivation of property without due process of law and a denial of the equal protection of the laws, contrary to the fourteenth amendment.

The State has undoubted power to protect the health of its people and to impose restrictions having reasonable relation to that end. The nature and extent of restrictions of this character are matters for the legislative judgment in defining the policy of the State and the safeguards required. In the avowed exercise of this power, the legislature of Illinois has enacted a prohibition—as the statute is construed—against the sale of food preservatives containing boric acid. And unless this prohibition is palpably unreasonable and arbitrary we are not at liberty to say that it passes beyond the limits of the State's protective authority. (*Powell v. Pennsylvania*, 127 U. S., 678, 686, 32 L. ed., 253, 257, 8 Sup. Ct. Rep., 992, 1257; *Crowley v. Christensen*, 137 U. S., 86, 91, 34 L. ed., 620, 623, 11 Sup. Ct. Rep., 13; *Holden v. Hardy*, 169 U. S., 366, 395, 42 L. ed., 780, 792, 18 Sup. Ct. Rep., 383; *Capital City Dairy Co. v. Ohio*, 183 U. S., 233, 246, 46 L. ed., 171, 175, 22 Sup. Ct. Rep., 120; *Jacobson v. Massachusetts*, 197 U. S., 11, 25, 49 L. ed., 643, 649, 25 Sup. Ct. Rep., 358, 3 Ann. Cas., 765; *New York ex rel. Silz v. Hesterberg*, 211 U. S., 31, 39, 53 L. ed., 75, 79, 29 Sup. Ct. Rep., 10; *McLean v. Arkansas*, 211 U. S., 539, 547, 53 L. ed., 315, 319, 29 Sup. Ct. Rep., 203; *Chicago, B. & Q. R. Co. v. McGuire*, 219 U. S., 549, 569, 55 L. ed., 328, 339, 31 Sup. Ct. Rep., 259; *Purity Extract & Tonic Co. v. Lynch*, 226 U. S., 192, 198, 57 L. ed., 184, 186, 33 Sup. Ct. Rep., 44; *Hammond Packing Co. v. Montana*, 233 U. S., 331, 333, 58 L. ed., 985, 987, 34 Sup. Ct. Rep., 596.)

The contention of the plaintiff in error could be granted only if it appeared that by a consensus of opinion the preservative was unquestionably harmless with respect to its contemplated uses; that is, that it indubitably must be classed as a wholesome article of commerce so innocuous in its designed use and so unrelated in any way to any possible danger to the public health that the enactment must be considered as a merely arbitrary interference with the property and liberty of the citizen. It is plainly not enough that the subject should be regarded as debatable. If it be debatable, the legislature is entitled to its own judgment, and that judgment is not to be superseded by the verdict of a jury upon the issue which the legislature has decided. It is not a case where the legislature has confined its action to the prohibition of that which is described

in general terms as unwholesome or injurious, leaving the issue to be determined in each case as it arises. The legislature is not bound to content itself with general directions when it considers that more detailed measures are necessary to attain a legitimate object. (*Atlantic Coast Line R. Co. v. Georgia*, 234 U. S., 280, 288, 58 L. ed. 1312, 1316, 34 Sup. Ct. Rep., 829.) Legislative particularization in the exercise of protective power has many familiar illustrations. The present case is one of such particularization, where the statute—read as the State court reads it—especially prohibits preservatives containing boric acid. The legislature thus expressed its judgment, and it is sufficient to say, without passing upon the opinions of others adduced in argument, that the action of the legislature can not be considered to be arbitrary. Its judgment appears to have sufficient support to be taken out of that category. See *Hipolite Egg Co. v. United States*, 220 U. S., 45, 51, 55 L. ed. 364, 365, 31 Sup. Ct. Rep., 364; Circular No. 15 (June 23, 1904), Bureau of Chemistry; Food Inspection Decision 76 (July 13, 1907); Bulletin (December 31, 1914), Bureau of Chemistry; U. S. Department of Agriculture.

It is further urged that the enactment, as construed, contains an unconstitutional discrimination against the plaintiff in error, but in this aspect, again, the question is whether the classification made by the legislature can be said to be without any reasonable basis. The legislature is entitled to estimate degrees of evil, and to adjust its legislation according to the exigency found to exist. And, applying familiar principle, it can not be said that the legislature exceeded the bounds of reasonable discretion in classification when it enacted the prohibition in question relating to foods and compounds sold as food preservatives. (*Ozan Lumber Co. v. Union County Nat. Bank*, 207 U. S., 251, 256, 52 L. ed. 195, 197, 28 Sup. Ct. Rep., 89; *Heath & M. Mfg. Co. v. Worst*, 207 U. S., 338, 354, 52 L. ed. 236, 243, 28 Sup. Ct. Rep., 114; *Lindsley v. Natural Carbonic Gas Co.*, 220 U. S., 61, 78, 55 L. ed. 369, 377, 31 Sup. Ct. Rep., 337, Ann. Cas., 1912C, 160; *Mutual Loan Co. v. Martell*, 222 U. S., 225, 235, 56 L. ed. 175, 179, 32 Sup. Ct. Rep., 74, Ann. Cas., 1913B, 529; *Eberle v. Michigan*, 332 U. S., 700, 706, 58 L. ed. 803, 806, 34 Sup. Ct. Rep., 464; *Keekee Consol. Coke Co. v. Taylor*, 234 U. S., 224, 227, 58 L. ed. 1288, 1289, 34 Sup. Ct. Rep., 856; *Miller v. Wilson*, 236 U. S., 273, 383, 384, ante, 342, 35 Sup. Ct. Rep., 342.) We find no ground for holding the statute to be repugnant to the fourteenth amendment.

The remaining contention is that the statute as applied violates the commerce clause. Treating the article as one on a footing with adulterated food, the power of the State to prohibit sales within its borders is broadly asserted on its behalf. On the other hand, the plaintiff in error insists that the compound is not an adulterated food and was not charged to be such, but was an article of commerce manufactured in another State; and that whatever may be the power of the State of Illinois over manufacture and sale apart from interstate commerce, the State could not prohibit its introduction and sale in the course of interstate commerce. It is not necessary, however, to deal with the question in the scope thus suggested. The sole ground for invoking the commerce clause in order to escape the restrictions of the State law is sought to be found in the doctrine with respect to sales in original packages. (*Brown v. Maryland*, 12 Wheat., 419, 6 L. ed., 678; *Leisy v. Hardin*, 135 U. S. 100, 34 L. ed. 128, 3 Inters. Com. Rep., 36, 10 Sup. Ct. Rep., 681; *Schollenberger v. Pennsylvania*, 171 U. S. 1, 22, 23, 43 L. ed. 49, 57, 18 Sup. Ct. Rep., 75.) The record, however, is wholly insufficient to support the contention. The stipulation of facts read in evidence by the State set forth that the defendant had sold in Chicago "two packages" of the compound. The State then introduced in evidence an "envelope used for inclosing the compound." This, among other things, bore a statement that the content of "this package is sufficient for four quarts." And it set forth prices as follows: "Retail price. 1 package, 10c. 3 packages, 25c. 7 packages, 50c. 15 packages, \$1." The clear inference from this evidence was that the compound was offered for sale at retail in small packages (in envelopes) suitable for the consumer.

The defendant made an offer of proof, and in lieu of the offered testimony it was conceded that the witness, if sworn, would testify that the compound mentioned in the statement of claim "is an article of commerce sold in Illinois, in the original package manufactured and made in Minnesota." As to the nature of the package nothing more was shown. All that was admitted was entirely consistent with the view that the original package referred to was simply the small package in the envelope which the State had described, and no error can be charged to the State court in so regarding it. Nothing appeared as to the character of the shipment from Minnesota to Illinois, and it would be wholly unjustifiable to assume that, in commercial shipments into the State, the small package was segregated or separately introduced. If these small packages were associated in their shipment into the State, as they naturally would be, and were subsequently sold separately or in various lots, these separate packages, although respectively in the original envelopes, would not be classed as "original packages" within the rule invoked, so as to escape the local law governing domestic transactions. We have repeatedly so held, in cases not materially different in this respect. (*Austin v. Tennessee*, 179 U. S. 343, 45 L. ed. 224, 21 Sup. Ct. Rep., 132; *Cook v. Marshall County*, 196 U. S. 261, 49 L. ed. 471, 25 Sup. Ct. Rep., 233; *Purity Extract & Tonic Co. v. Lynch*, 226 U. S. 192, 199-201, 57 L. ed. 184, 186-188, 33 Sup. Ct. Rep., 44.) The testimony offered by the plaintiff in error and treated as received, taken in connection with what had already been proved as to the character of the packages put up for retail sale, fell far short of the proof required to constitute a defense upon the ground that the State law, otherwise valid, was applied in contravention of the commerce clause.

It should be added that no question is presented in the present case as to the power of Congress to make provision with respect to the immediate containers (as well as the larger receptacle in which the latter are shipped) of articles prepared in one State and transported to another, so as suitably to enforce its regulations as to interstate trade. (*McDermott v. Wisconsin*, 228 U. S. 115, 135, 57 L. ed. 754, 767, 47 L. R. A. (N. S.) 984, 33 Sup. Ct. Rep., 431.) It does not appear that the State law as here applied is in conflict with any Federal rule.

Judgment affirmed.

MARYLAND COURT OF APPEALS.

Garbage, Ashes, and Refuse—Removal by Municipality—Ordinances—Powers of Municipal Boards.

MAYOR AND COUNCIL OF BALTIMORE ET AL. v. HAMPTON COURT CO., 94 Atl. Rep., 1018. (June 22, 1915.)

An ordinance duly passed in the exercise of a power delegated to a municipality amounts to a local law and is just as binding and obligatory as if it had been adopted by the legislature itself.

The municipality itself may, by ordinance, amend, alter, or repeal an ordinance; but a board, department or commission of the municipal government can not, directly or indirectly, change the effect of an ordinance.

City ordinances required the commissioner of street cleaning to collect garbage, ashes, and refuse from dwellings and other places in the city of Baltimore. The city board of estimates directed the commissioner of street cleaning to discontinue the collection of ashes from hotels, certain apartment houses, office buildings, and other large structures. The court held that this action was beyond the power of the board, and issued an injunction requiring the commissioner of street cleaning to carry out the provisions of the ordinance and prohibiting the board of estimates from interfering with him in the performance of his duties.

Municipal rules providing for the removal of garbage, ashes, and refuse from dwellings and other buildings must be reasonable; and a classification of apartment houses which excludes the inhabitants of certain apartments from the benefits of the removal of ashes because of the number of stories in the building and the fact that they have elevators is arbitrary and unreasonable.

STOCKBRIDGE, J.: The question presented in this case is the power of the board of estimates of the city of Baltimore by making an inadequate provision in the ordinance of estimates to render impossible in part the performance of a duty imposed by ordinance upon one of the departments of the city government.

As the result of a large number of successive ordinances, the history of which it is not necessary to repeat in detail, the duty is imposed upon the commissioner of street cleaning of removing offal, coal and other ashes, and the collection and removal of "garbage, street and household refuse from the dwellings and other places in the city of Baltimore," and also ice and snow from the gutters and street crossings and from the front of the public schools, public buildings, bridges, and public wharves belonging to the city, and the footways of the city springs and public squares. Baltimore City Code 1893, article 48, sections 187, 188. The terms in which this duty is placed upon the commissioner of street cleaning are such as to make its discharge mandatory in character, under the uniform principles of construction frequently declared by this court. For the purpose of performing this duty, the board of estimates, in the preparation of the ordinance of estimates, has, ever since the creation of that board, included an appropriation for the purposes enumerated. The amounts of those appropriations for a number of successive years are alleged in the supplemental bill of complaint, and practically admitted by the answers, to have been as follows:

	1910	1911	1912	1913	1914
To the commissioner of street cleaning:					
Removal of garbage.....	\$60,500.00	\$62,500.00	\$64,500.00	\$66,500.00	\$68,500.00
Collection of ashes and garbage.....	185,000.00	210,000.00	216,954.22	227,483.22	227,483.22

It further appears in the evidence that in the ordinance of estimates for the year 1915 appears an item for the "collection of garbage, \$227,483.22"; and it is further testified that this is the same appropriation as that made in the years 1913 and 1914 for the collection of ashes and garbage. Whether there was any appropriation for the year 1915, separate and distinct for the removal of garbage, corresponding to the appropriation made of \$66,500 in 1913 and \$68,500 in 1914 does not clearly appear. It will thus be observed that notwithstanding the steady growth in population of Baltimore, and the increased number of dwellings erected from year to year, the appropriation for the "collection of ashes and garbage" has remained constant at \$227,483.22 for the years 1913, 1914, and 1915. That the appropriations made for 1913 and 1914 were adequate for the purpose, and more than adequate, appears from the fact that at the end of 1913 there was covered back into the city treasury an unexpended balance of the appropriation of \$6,368.45, and for the year 1914 a like surplus of \$1,906.81, while from all the appropriations made for the work of the commissioner of street cleaning there was covered into the city treasury unexpended balances, and sums received for work done, amounting in the aggregate to approximately \$70,000.

For some time prior to the month of June, 1913, under the construction placed upon the ordinances, the commissioner of street cleaning had removed, at the city's expense, the ashes and garbage and household refuse from the dwellings in said city, from the apartment houses, and from a portion of the hotels. Under date of June 5, 1913, a communication was sent to the commissioner of street cleaning by the board of estimates which reads as follows:

COMMISSIONER OF STREET CLEANING.

DEAR SIR: The board of estimates at a special meeting, June 5th, again considered the question of removing ashes from buildings and adopted the following ruling: Houses not more than four stories in height and not having an elevator, used for dwelling purposes, even though they may be occupied by more than one family, should be classed as dwellings, and the commissioner of street cleaning should take the ashes therefrom. Houses more than four stories in height, used for dwelling purposes, occupied by more than one family, should be classed as apartment houses. The board directs that you be governed accordingly.

This letter of "ruling" was very ingeniously worded. It did not in terms direct the commissioner of street cleaning to cease removing ashes from hotels, apartment houses, office buildings, or other large buildings in the city of Baltimore, but merely

to give a definition of "dwellings." It was evidently intended, however, to be interpreted by the commissioner of street cleaning in connection with section 188 of article 48 of the Baltimore City Code, 1893, which made it the duty of the commissioner of street cleaning to remove the "coal or other ashes from the dwellings and other places." Acting upon this communication, the commissioner of street cleaning discontinued and refused to remove ashes from certain apartment houses, from which he had theretofore been collecting and removing the same. The present bill is filed for a prohibitive injunction against the commissioner of street cleaning to enjoin him from refusing to remove such ashes, and for a mandatory injunction requiring him so to remove them, also for a prohibitive injunction against the board of estimates to restrain them from interfering with the commissioner of street cleaning in the performance of a duty prescribed for him by ordinance.

While quite a number of actual or possible aspects of the case were argued before this court, it is only necessary to consider one or two of them in order to reach a conclusion. Apparently it was the idea of the law officers of the city that the adoption of the charter (chapter 123 of the Acts of 1898) by the large powers of control over the finances of the city, which had been vested in the board of estimates, enabled that body indirectly to repeal or nullify antecedent ordinances of the mayor and city council. In *Baltimore v. Gorter* (93 Md. 1, 48 Atl., 445), this court fully reviewed the scheme contained in the city charter for the administration of the city's finances, which renders it unnecessary at this time to repeat them in detail. But in *Bostock v. Sams* (95 Md., 400, 52 Atl. 665, 59 L. R. A. 282, 93 Am. St. Rep., 394), this court had to deal directly with the effect of the adoption of the charter on ordinances existing at the time of such adoption, and it was then said that the provisions of the act of 1898 had "no reference to validating invalid ordinances, and was not intended to have such operation and effect. It was merely intended to preserve the municipal status as to all laws and ordinances that might be in force at the date of the adoption of the charter * * * and to continue them in force, in the passing of the corporation from the control of the old charter to that of the new, with the same effect, and no more, as if the change in the charter had not been made."

Nor can it be supposed for one moment that it was the intention of the legislature, in the adoption of the charter, to vest in any of the subordinate boards created by that charter the power directly or indirectly to set at naught the performance of a duty imposed by ordinance upon any department or subdepartment of the city government. An ordinance of a municipal corporation duly passed in the exercise of a power delegated to the municipality amounts to a local law, and is just as binding and obligatory as if it had been adopted by the legislature itself, and it may even prevail over a general law upon the same subject. *Gould v. Baltimore* (120 Md., 534, 87 Atl., 818). It is, of course, competent for the municipality itself by ordinance to amend, alter, or repeal an ordinance theretofore adopted, but it does not lie within the power of any board, department, or commission of the municipal government, directly or indirectly, to so amend, alter, or repeal.

The evident purpose of the board of estimates was by an attempted classification of buildings to relieve the city from the burden and expense of collecting the ashes from a considerable number of larger buildings, and particularly hotels, apartment houses, factories, department stores, and educational institutions and the like, and this purpose was sought to be effected by framing a definition of what were to be regarded as dwellings. By that definition any structure occupied by more than a single family, as a place of habitation, if it contained an elevator, or if it exceeded four stories in height, was to be classed not as a dwelling but an apartment house. By this ruling it was sought to exclude certain buildings from being regarded as dwellings, and then inasmuch as the ordinance, which placed the duty of removing "coal and other ashes" upon the commissioner of street cleaning, specifically named dwellings, it would follow that the commissioner of street cleaning was under no obligation to

remove the ashes from any apartment house that did not come within the terms of the definition. This ignored the language of the ordinance "and other places," but it is not necessary to rest the decision of this case upon those words.

There can be no question but what the municipality (the mayor and city council of Baltimore) had the power by ordinance to regulate the removal of ashes, in the exercise of its police power. (*Schultz v. State*, 112 Md., 211, 76 Atl., 592; *Haley v. Boston*, 191 Mass., 291, 77 N. E. 888, 5 L. R. A. (N. S.), 1005; *Rossberg v. State*, 111 Md., 394, 74 Atl., 581, 134 Am. St. Rep., 626.) It could amend, alter, or repeal the existing ordinances on the subject, and, subject to the limitation that such ordinances must be reasonable in their provisions, could classify the buildings from which such removal should be made at the public expense. By way of illustration, there are many and cogent reasons why the cost of the removal of manufacturing and commercial waste from factories and department stores should not be borne by the public at large, or even the refuse from hotels, which are without force in the case of the ordinary householder, and a number of cities have enacted regulations which recognize that distinction. But such classification is a power to be exercised by the municipal corporation as such through its legislative branch of government, not one resting in any board or commission of the municipality. Therefore, when the board of estimates made its ruling on the 5th of June, 1913, it acted *ultra vires*, in so far as that operated or was intended to operate as a modification of existing ordinances, and the attempted ruling was void and of no effect. But, in addition to this, the ruling of the board can not be regarded in any other light than arbitrary. Many definitions have been given in adjudicated cases of a dwelling, and they are not entirely harmonious. The usual line of demarcation has been the use to which the building is devoted as a habitation for man. (*N. Y. Fire Dept. v. Buhler*, 33 How. Prac. (N. Y.), 378, 383, 35 N. Y., 177; *Davis v. State*, 38 Ohio St., 505, 506; and cases collected in 3 Words and Phrases, 2288.)

But in the present instance it is made to depend upon there being an elevator or not, if the structure is occupied by more than a single family, or upon the number of stories. Hence there may be two buildings side by side, of the same height, each occupied by three families, but the one having an elevator operated by hydraulic or electric power, the other without an elevator, and yet the one is to be classed as a dwelling entitled to have its ashes, garbage, and refuse removed by the city, and the other not. A more arbitrary discrimination it is difficult to conceive.

It remains to consider the effect of the failure of the board of estimates to include in the ordinance of estimates an appropriation adequate in the judgment of the commissioner of street cleaning to perform the duties with which he is charged by the city ordinances. That such failure was the result of an accident is not claimed; on the contrary, it is boldly asserted, in the brief on behalf of the city, that it was a deliberately planned omission, planned for the purpose of coercing the owners of apartment houses not coming within the board's definition of a dwelling, to bear the expense of the removal of the ashes from such houses.

It is no answer for the board to say that it provided an appropriation as large as the commissioner had asked for. The estimate submitted by him was made up upon the basis of what he understood to be the desire of the board, as evidenced by the instructions given to him. The inadequacy of the appropriation, therefore, if there should be any, is one for which the board of estimates, and that body alone, is responsible.

But is or will there be any such inadequacy? On that subject there is only the testimony of Mr. Larkins, and this is of the most unsatisfactory kind. It can not be described in any other way than guesswork, without even the semblance of being the result of computation. But a few facts are to be discovered in his testimony, namely, that in each of the years 1913 and 1914 there was an unexpended surplus of the appropriation for the removal of ashes and garbage turned back into the city treasury; that it has been a practice at times employed by him to divert some portion of an appropria-

tion made for one purpose to another; and that it is his present plan to so divert \$4,000 of the appropriation of \$227,483.22 to the building of a new dumping platform. Nor are the figures given by Mr. Larkins as to the probable inadequacy of the appropriation for 1915 any more convincing. They range all the way from \$12,693.72 to \$250,000 (an unusually large margin of variation), the smaller figure being the result, he testifies, at which he arrived for adding to his work certain apartment houses in March, 1914, the latter as the result to follow for taking charge of the removal of the refuse of a considerable number of buildings for which no relief is asked in this case. Starting with the smaller sum referred to, he "estimates" the increased cost above the amount appropriated for the current year to be \$20,000 in place of \$12,693.72.

One further fact appears, not dependent upon Mr. Larkins's estimates, viz, that the ordinance making appropriations for the department of street cleaning for the year 1915 contained this item, not embodied in the ordinance of any previous year:

Emergency fund, to be expended only upon written orders of the board of estimates, \$45,000.

The use of this is not restricted to any specific purpose. The disposition of it rests solely with the board of estimates, which can make use of it, or some portion of it, for such purpose as it may deem proper. It may develop that the appropriation of \$227,483.22 is inadequate for the proper performance of the work for which the appropriation was made, though the evidence of this is far from being satisfactory or convincing; but, if that should happen there is nothing to prevent the board of estimates from employing some portion at least of this emergency fund for that purpose, indeed it would be its duty to do so, as the inadequacy of the appropriation was the result of the deliberate act of the board. This is upon the assumption that the appropriation, as made, shall prove actually inadequate, which the evidence falls far short of satisfactorily establishing.

The appellants laid much stress on the case of *People v. Woodbury* (88 App. Div. 443, 85 N. Y. Supp., 174), as being identical in all respects with and controlling of the present case. An examination of that case discloses a number of striking differences. In that case the commissioner of street cleaning of the city of New York gave notice that he would discontinue removing ashes and trade waste from "office buildings, wholesale houses, and department stores," without distinction as to their being large or small, and at the same time notice was given that the city would receive at the department dumps the ashes from such buildings, when hauled there by the owners. There was no attempt by arbitrary definition to exclude some and include others of the character of buildings mentioned. Dealing with this, the court (PATTERSON, J.) said:

But the city having assumed the duty, and the commissioner of street cleaning being charged with the performance of that duty, a purely arbitrary discrimination made in favor of some and against other inhabitants would not be tolerated. One citizen has as much right to the performance of the public service as another.

Failing to find any error in the decision of the Circuit Court No. 2 of Baltimore City, the decree appealed from will be affirmed as to both appellants.

Decree affirmed; costs to be paid by the mayor and city council of Baltimore.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

OREGON.

Rabies—Prevention of—Bounties for Killing Wild Animals. (Chap. 26, Act Feb. 4, 1915.)

SECTION 1. That section 5747 of Lord's Oregon Laws be and the same hereby is amended to read as follows:

SEC. 5747. There shall be paid by the State of Oregon and the counties thereof as in this act and in the manner hereinafter provided for the killing and destruction of the following named animals, hereafter killed in the State of Oregon, the following bounties: For each coyote or coyote pup, \$1.50, but the sum of \$3 and no more for each coyote or coyote pup to and including December 31, 1915; for each gray wolf or black wolf, \$5; for each gray wolf pup, black wolf pup, timber wolf or timber wolf pup, \$2.50; for each bobcat, wildcat, or lynx, \$2; for each mountain lion, panther, or cougar, \$10.

State Board of Health—Appropriations for 1915 and 1916. (Chap. 296, Act Feb. 24, 1915.)

SECTION 1. The following sums, or so much thereof as may be necessary, and no more, are hereby appropriated out of the moneys in the general fund in the State treasury, not otherwise appropriated, for the several objects and purposes hereinafter named, for the two years commencing on the 1st day of January, 1915, and ending on the 31st day of December, 1916, viz:

For the payment of the expenses of the State board of health incurred in the supervision of the interests of the health and lives of the citizens of the State; in collecting and keeping the vital statistics of the State; in making sanitary investigations and inquiries respecting the causes and prevention of diseases, including those of domestic animals; in the study of the causes of mortality, and the effects of localities, employments, conditions, foods, beverages, habits, and circumstances of the health of the people; in making and enforcing quarantine regulations; in the purchase of vaccines and sera; in equipping and maintaining a suitable laboratory; for the payment of the traveling and other necessary expenses of the members of the board incurred in the performance of their official duties; for the payment of the salaries of employees and of office clerks and stenographers and official registrars of vital statistics, office rent, office stationery and office supplies, and such other expenses as may be necessary and proper in carrying into force and effect the various statutes creating said board and defining its duties and powers: *Provided, however,* That said board shall immediately establish, transfer, and maintain its offices and laboratory in the capital city when so directed by the governor, \$30,000.

For the aid of the Oregon Social Hygiene Society in continuing, extending, and prosecuting its educational work throughout the State of Oregon in the cause of social hygiene: *Provided,* That the amount hereby appropriated shall be expended under the supervision and direction of the Oregon State Board of Health, \$15,000.

SEC. 2. Any sum or amount of money that shall have been paid for any of the objects specified in section 1 of this act, from any continuing appropriation or in any manner from the State treasury, for expenses, accruing during the period therein stated, shall be deducted from the amount hereby appropriated therefor, and no more than the respective sums herein specified shall be paid for the several objects mentioned from the State treasury by reason of any and all appropriations for such respective objects.

SEC. 3. The secretary of State is hereby authorized and directed to audit all duly approved claims which have been incurred in pursuance of law and the foregoing appropriations, and to draw his warrants on the State treasurer for payment thereof out of the respective appropriations from which the same may be determined to be payable.

Poisons and Drugs—Penalty for Violation of Act Regulating the Sale of. (Chap. 201, Act Feb. 23, 1915.)

SECTION 1. That section 12 of chapter 164 of the general laws of the State of Oregon for the year 1913, be and the same hereby is amended to read as follows:

SEC. 12. Any person who shall attempt to secure or secures registration for himself or herself or any other person under this act by making or causing to be made any false representations, or who shall fraudulently represent himself to be registered shall be deemed guilty of a misdemeanor and upon conviction thereof shall be liable to punishment by a fine not exceeding \$100 or by imprisonment for a term not exceeding 50 days, or by both such fine and imprisonment. Any person who shall permit the compounding of prescriptions of medical practitioners, or the selling of drugs, medicines, chemicals, or poisons, in his or her store or pharmacy, except by a registered pharmacist or registered assistant pharmacist or who violates any of the provisions of this section of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be liable to punishment by a fine of not less than \$100 and not more than \$200 or by imprisonment of not exceeding 50 days, or by both such fine and imprisonment: *Provided, however,* That nothing in this act shall apply to or interfere with any practitioner of medicine or dentistry who is duly registered as such by their respective State board of examiners of this State, with supplying his own patients, as their physician or dentist and by them employed as such, with such remedies as he may desire, and who does not keep a pharmacy, open shop, or drug store, advertised or otherwise, for the retailing of medicines or poisons; nor does this act apply to the exclusively wholesale business of any dealer, nor to the manufacture or sale of proprietary medicines or patent medicines, or to the sale of any household remedies and medicines, by general dealers not druggists, in the original packages when properly labeled; nor does this act apply to the supplying by veterinary surgeons duly registered under the laws of the State of Oregon of remedies required in the practice of their profession; nor to the sale by grocers and dealers generally of the following named poisons, to wit: Fly paper, ant poison, squirrel poison, gopher poison, arsenical poison used for orchard spraying when sold in the original unbroken package and blue stone when properly labelled with the name of the dealer and marked poison.

Vital Statistics—Record and Reporting of—State Board of Health to Provide Suitable Books and Blanks. (Chap. 44, Act Feb. 9, 1915.)

SECTION 1. Section 4694 of Lord's Oregon Laws is hereby amended to read as follows:

The State board of health shall provide suitable books and suitable blanks for keeping [a] record of vital statistics and for reporting the same to county boards of health and secretary of the State board of health.

Mattresses, Comforters, Pillows, etc.—Sale of—Labeling. (Chap. 192, Act Feb. 23, 1915.)

SECTION 1. Whoever manufactures for sale, offers for sale, sells, delivers or has in his possession with intent to sell or deliver, any mattress, comfort, pillow, or other article of bed clothing, which contains a covered filling, which is not properly branded or labeled, or whoever uses, either in whole or in part, in the manufacture of mattresses, comforters, pillows, or other articles of bed clothing which contain a covered filling, any cotton or other material which has been used, or has formed a part of any mattress, pillow, or bed used in or about any public or private hospital, or on or about any person having infectious or contagious disease; or whoever dealing in mattresses, comforters, pillows, or other article of bed clothing which contain a covered filling has any such article of personal property in his possession for the purpose of sale, or offers it for sale without a brand or label as herein provided, or removes, conceals, or defaces the brand or label thereon, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than \$25 nor more than \$500, or by imprisonment in the county jail not exceeding six months, or by both such fine and imprisonment: *Provided*, That nothing herein contained shall be construed as prohibiting any of the various State institutions of this State from remaking any of its own mattresses or other articles of bed clothing, provided the same are properly fumigated or sterilized: *And provided further*, That nothing in this act contained shall be construed as prohibiting the sale of secondhand mattresses, or other articles of bed clothing, without the use of such label, if such mattress or other article of bed clothing has not been remade for the purpose of sale, or if the same is labeled and sold as a secondhand article.

SEC. 2. The brand or label shall contain in plain print, in the English language, a statement of the material used in the manufacture of such mattress, comforter, pillow, or other article of bed clothing, whether such article of personal property is in whole or in part new or secondhand, and the quantity of new and secondhand materials used, and the qualities of the materials used. Such brand or label shall be in the shape of a paper or cloth tag, to be sewed or otherwise securely attached to each article.

SEC. 3. Any mattress within the meaning of this act shall be defined as being a quilted pad stuffed with hair, wool, or other soft material to be used on a bed for sleeping or reclining purposes; and any comforter within the meaning of this act shall be defined as being any bedspread filled with cotton, wool, or down, or any other soft filling.

SEC. 4. Whenever any State or county health board, or any other public officer, shall have reason or cause to believe that any of the provisions of this act are being, or have been, violated, such board, or member thereof, or any public officer, shall advise the attorney general of the State, and the district attorney of the county where such violation has taken place, giving his information in support of such belief; and it shall be the duty of the attorney general and of the district attorneys of any county in which a violation occurs, to forthwith institute the proper legal proceedings for the enforcement of the provisions of this section, and for the punishment of the violation thereof.

UTAH.**Poisons and Drugs—Possession, Sale, and Dispensing—Labeling. Opium Pipes—Possession of.** (Chap. 66, Act Mar. 17, 1915.)

SEC. 1. *Selling poisons.*—It shall be unlawful for any person to vend, sell, give away, or furnish, either directly or indirectly, any poisons enumerated in schedules A and B in section 7 of this act as hereinafter set forth, without labeling the package, box, bottle, or paper in which said poison is contained with the name of the article, the word "poison," and the name and place of business of the person furnishing the same.

Said label shall be substantially in the form hereinafter provided. It shall be unlawful to sell or deliver any of the poisons named in schedule A or any other dangerously poisonous drug, chemical, or medicinal substance, which may from time to time be designated by the State board of pharmacy, unless on inquiry it is found that the person desiring the same is aware of its poisonous character, and it satisfactorily appears that it is to be used for a legitimate purpose. It shall be unlawful for any person to give a fictitious name or make any false representations to the seller or dealer when buying any of the poisons thus enumerated: *Provided*, That this prohibition shall not apply to an officer or inspector of the State board of pharmacy in the performance of the duties enjoined by law upon said board, or to any person acting under authority of said board in the performance of said duties. Printed notice of all such additions to the schedule of poisons named and provided for in this section, and the antidote adopted by the board of pharmacy for such poisons shall be given to all registered pharmacists with the next following renewal of their certificates.

It shall be unlawful to sell or deliver any poison included in schedule A, or the additions thereto, without making or causing to be made an entry in a book kept solely for that purpose, stating the date and hour of sale and the name, address, and signature of the purchaser, the name and quantity of the poison sold, the statement by the purchaser of the purpose for which it is required, and the name of the dispenser, who must be a duly registered pharmacist: *Provided, however*, That said entry shall be made out in full, in ink, before said signature of the purchaser is made thereto, and that said entry shall be made by said dispenser himself and not by any person who is not a duly registered pharmacist or duly registered assistant pharmacist.

Said book shall be in form substantially as follows:

Date and hour.	Name of purchaser.	Residence.	Kind and quality.	Purpose of use.	Signature of druggist.	Signature of purchaser.
----------------	--------------------	------------	-------------------	-----------------	------------------------	-------------------------

This book shall always be open for inspection by the proper authorities and shall be preserved for at least five years after the date of the last entry therein.

SEC. 2. *Labeling poisons.*—The label required by this act to be placed on all packages of poison shall be printed upon red paper in distinct white letters, or in distinct red letters upon white paper, and shall contain the word "poison," the "vignette" representing the skull and crossbones, and the name and address of the person or firm selling the same. The name of an antidote, if any there be, for the poison sold, shall also be upon the package. No poison shall be sold or delivered to any person who is less than 18 years of age.

SEC. 3. It shall be the duty of the State board of pharmacy to adopt a schedule of what, in their judgment, are the most suitable common antidotes for the various poisons usually sold. After the board has adopted the schedule of antidotes as herein provided for they shall have the same printed and shall forward by mail one copy to each person registered upon their books, and to any other person applying for the same. The particular antidote adopted (and no other) shall appear on the poison label provided for in section 2 of this act or be attached to the package containing said poison. The board shall have power to revise and amend the list of antidotes from time to time as to them may seem advisable. The entries in the poison book and the printed or written matter provided for in sections 2 and 3 of this act shall be in the English language: *Provided*, That the vendor of said poison may enter the same in any foreign language he may desire, in addition to said entry and label in English.

SEC. 4. When in the opinion of the State board of pharmacy it is in the interest of the public health, they are hereby empowered to further restrict or prohibit the retail sale of any poison by rules, not inconsistent with the provisions of this act, by them

to be adopted, and which rules must be applicable to all persons alike. It shall be the duty of the board, upon request, to furnish any dealer with a copy of the laws relating to articles, preparations, and compounds, the sale of which is prohibited or regulated by this act.

SEC. 5. *Wholesale dealers.*—Wholesale dealers and pharmacists shall affix or cause to be affixed to every bottle, box, parcel, or other inclosure of an original package containing any of the articles named in schedule A, the additions thereto, or in sections 8 and 9 of this act, a suitable label or brand, with the word "poison," but they are hereby exempted from the registration of the sale of such articles when sold at wholesale to a registered pharmacist, physician, dentist, or veterinary surgeon duly licensed to practice in the State: *Provided*, That the provisions of this act shall not apply to the sale of such upon the prescriptions of practicing physicians, dentists, or veterinary surgeons who are duly licensed to practice in this State: *And provided further*, That wholesale dealers are hereby exempted from the registration of the sales of the articles enumerated in schedule A of section 7 of this act, where such sales are made for assaying, metallurgical, scientific, or industrial uses and purposes.

SEC. 6. The State board of pharmacy shall have power to employ special counsel to assist the county attorney or the district attorney in all actions and prosecutions instituted or prosecuted for the violation of any of the provisions of this act.

SEC. 7. *Penalties.*—Any person violating any of the provisions of section 8 or 8a of this act shall upon conviction be punished as follows, viz: For the first offense, by a fine of not less than \$100 and not to exceed \$400, or by imprisonment for not less than 50 days and not exceeding 180 days, or by both such fine and imprisonment; for the second offense, by a fine of not less than \$250 and not to exceed \$500, or by imprisonment for not less than 90 days and not exceeding six months, or by both such fine and imprisonment; and for the third offense, by imprisonment in the State prison for not less than one year and not more than five years. Any person violating any of the provisions of this act, except those contained in section 8 or 8a, shall be deemed guilty of a misdemeanor and upon conviction shall be fined in a sum not less than \$30 nor more than \$200, or by imprisonment for not less than 30 days and not more than 50 days, or by both such fine and imprisonment. All moneys, forfeited bail, or fines received under the operation of this act shall be paid by the magistrate receiving the same, 75 per cent to the State board of pharmacy and 25 per cent to the city treasurer of the city, if incorporated, otherwise to the county treasurer of the county in which the prosecution is conducted. The following is schedule A referred to in section 1, viz: Schedule A.—Arsenic, its compounds and preparations, corrosive sublimate, and other poisonous derivatives of mercury, corrosive sublimate tablets, antiseptic tablets containing corrosive sublimate, cyanide of potassium, strychnine, hydrocyanic acid, oils of croton, rue, tansy, pennyroyal, savin; ergot and cottonroot and their preparations, phosphorus and its poisonous derivatives and compounds, compound solution of cresol, lysol, strophanthus or its preparations, aconite, belladonna, nux vomica, veratrum viride, their preparations, alkaloids, or derivatives, and poison containing any of the poisons enumerated in this schedule.

The following is schedule "B": Hydrochloric or muriatic acid, nitric acid, oxalic acid, sulphuric acid, bromine, chloroform, cowhage, creosote, ether, solution of formaldehyde or formalin; cantharides, cocculus indicus, all their preparations; iodine or its tinctures, tartar emetic, and other poisonous derivatives of antimony, sugar of lead, sulphate of zinc, and wood alcohol.

SEC. 8. *Sale of cocaine, morphine, codeine, etc.*—It shall be unlawful for any person; firm, or corporation to sell, furnish, or give away or offer to sell, furnish, or give away, or to have in their or his possession any cocaine, opium, morphine, codeine, heroin, alpha eucaïne, beta eucaïne, nova caïne, flowering tops and leaves, extracts, tinctures, and other narcotic preparations of hemp or loco weed (*cannabis sativa*, Indian hemp), or chloral hydrate or any of the salts, derivatives, or compounds of the foregoing sub-

stances or any preparation or compound containing any of the foregoing substances or their salts, derivatives, or compounds, excepting upon the written order or prescription of a physician, dentist, or veterinary surgeon licensed to practice in this State, which order or prescription shall be dated and shall contain the name of the person for whom prescribed, written in by the person writing said prescription, or, if ordered by a veterinary surgeon, it shall state the kind of animal for which ordered and shall be signed by the person giving the prescription or order. Such order or prescription shall be permanently retained on file by the person, firm, or corporation who shall compound or dispense the articles ordered or prescribed, and it shall not be again compounded or dispensed, excepting upon the written order of the prescriber for each and every subsequent compounding or dispensing.

No copy or duplicate of such written order or prescription shall be made or delivered to any person, but the original shall be at all times open to inspection by the prescriber and properly authorized officers of the law and shall be preserved for at least three years from the date of the filing thereof: *Provided*, That the above provisions shall not apply to sales at wholesale by jobbers, wholesalers, and manufacturers to pharmacies, as defined in chapter 1, title 62, compiled laws of Utah, 1907, entitled "pharmacy"; or physicians, nor to each other, nor to the sale at retail in pharmacies by pharmacists to physicians, dentists, or veterinary surgeons duly licensed to practice in this State: *Provided further*, That all such wholesale jobbers, wholesalers, and manufacturers in this section mentioned shall, before delivery of any of the articles in this section enumerated, make or cause to be made in a book kept for that purpose only, an entry of the sale of any such article, stating the date of such sale and quantity and name of the article and form in which sold, the true name and true address of the purchaser, the name of the person by whom such entry and sale was made; also a statement showing how delivery was had, whether delivered personally or forwarded by mail, express, or by freight, which book shall be substantially as follows:

Date of sale.	Quantity and name of article.	Name of purchaser.	How delivered.	Name of person selling.
---------------	-------------------------------	--------------------	----------------	-------------------------

And said book shall always be open for inspection by any peace officer or any member of the board of pharmacy, or any inspector authorized by said board and such book shall be preserved for at least five years after the date of the last entry therein. The taking of any order, or making of any contract or agreement, by any traveling representative, or any employee, or any person, firm, or corporation, for future delivery in this State, of any of the articles or drugs mentioned in this section shall be deemed a sale of said articles or drugs by said traveling representatives or employee, within the meaning of the provisions of this act: *Provided further*, That a true and correct copy of all orders, contracts, or agreements taken for narcotic drugs specified in this section shall be forwarded by registered mail to the secretary of the State board of pharmacy within 24 hours after the taking of such order, contract, or agreement, unless such order, contract, or agreement is recorded by entry in a book used for that purpose only, of some wholesale jobber, wholesaler, or manufacturer permanently located in this State, as provided for in this section.

It shall be unlawful for any practitioner of medicine, dentistry, or veterinary medicine to furnish to or prescribe for the use of any habitual user of the same, or of any one representing himself as such, any cocaine, opium, morphine, codeine, heroin, or chloral hydrate, or any salt, derivative, or compound of the foregoing substances or their salts, derivatives, or compounds; and it shall also be unlawful for any practitioner of medicine or dentistry to prescribe any of the foregoing substances for any person not under his treatment in the regular practice of his profession, or for any veteri-

nary surgeon to prescribe any of the foregoing substances for the use of any human being: *Provided, however,* That the provisions of this section shall not be construed to prevent any duly licensed physician from furnishing or prescribing in good faith as their physician by them employed as such, for any habitual user of any narcotic drugs who is under his professional care, such substances as he may deem necessary for their treatment, when such prescriptions are not given or substances furnished for the purpose of evading the purpose of this act: *Provided,* That such licensed physician shall report in writing, over his signature, by registered mail, to the office of the State board of pharmacy, within 24 hours after the first treatment, each and every habitual user of such narcotic drugs as are enumerated in this section, whom he or she has taken, in good faith, under his or her professional care for the cure of such habit, such report to contain the date, name and address of such patient, and the name and quantity of the narcotic or narcotics prescribed in such treatment: *Provided, further,* That the provisions immediately foregoing shall not apply to any licensed physician treating such habit in good faith, who personally administers such narcotics, enumerated in this section, after writing a prescription therefor: *And provided, further,* That the above provisions shall not apply to preparations sold or dispensed without a physician's prescription containing not more than two grains of opium, or one-fourth grain of morphine, or one grain of codeine, or one-sixth grain of cocaine, or one-fourth grain of heroin, or one-sixth grain of eucaine, or one-sixth grain of nova caine, or one-half grain extract cannabis indica, or one-sixth grain beta eucaine, or 10 grains chloral hydrate in 1 fluid ounce, or, if a solid preparation, in one ounce, avoirdupois; or to linaments, ointments, or other preparations which are prepared for external use only, except linaments, ointments, and other preparations which contain cocaine or any of its salts or alpha or beta eucaine or any of their salts, or any synthetic substitute for them: *Provided,* That such remedies and preparations are sold, distributed, given away, dispensed, or possessed as medicines and not for the purpose of evading the intentions and provisions of this act.

SEC. 8a. *Opium pipes, etc.*—The possession of a pipe or pipes or other contrivances used for smoking opium (commonly known as opium pipes) or the usual attachment or attachments thereof, or extracts, tinctures, or other narcotic preparations of hemp or loco weed, their preparations or compounds (except corn remedies containing not more than 15 grains of the extract or fluid extract of hemp to the ounce, mixed with not less than five times its weight of salicylic acid combined with collodion), is hereby made a misdemeanor, and upon conviction thereof shall be punishable by the penalties prescribed in section 7 of this act.

SEC. 8b. All narcotic drugs specified in section 8 and also all pipes used for smoking opium (commonly known as opium pipes) or the usual attachments thereto, or extracts, tinctures, or other narcotic preparations of hemp or loco weed, their preparations or compounds (except corn remedies containing not more than 15 grains of the extract or fluid extract of hemp to the ounce, mixed with not less than five times its weight of salicylic acid combined with collodion), may be seized by any peace officer, and in aid of such seizure a search warrant or search warrants may be issued in the manner and form prescribed in chapter 56, title 91, compiled laws of Utah, 1907, entitled, "Code of criminal procedure." All such narcotic drugs, pipes used for smoking opium (commonly known as opium pipes) or the usual attachments thereto, and all such hemp seized under the provisions of this act shall be ordered destroyed by the judge of the court in which final conviction was had; said order of destruction shall contain the name of the party charged with the duty of destruction as herein required: *Provided, however,* That the judge shall turn all such evidence over to the State board of pharmacy for such destruction: *And, provided further,* That the board of pharmacy may dispose of all narcotics now on hand or hereafter coming into their possession (other than smoking opium), either by gift to the medical director of Utah State prisons or State hospitals or by sale to wholesale druggists, the funds received

from such sales to be applied by the board of pharmacy to the carrying out of the provisions of this act or of the act creating such Utah State board of pharmacy.

SEC. 8c. The board may revoke the registration and license of any registered pharmacist or assistant pharmacist upon conviction of the second offense for violating any of the provisions of sections 8 or 8a of this act, and in such case said registration shall not be restored before the period of one year from the date of said revocation.

SEC. 9. *Sale of carbolic acid.*—The sale or furnishing of carbolic acid (phenol) in quantities of less than 1 pound is prohibited unless upon the prescription of a physician, dentist, or veterinary surgeon duly licensed to practice in this State, but this prohibition shall not apply to solutions of carbolic acid (phenol) containing not over 10 per cent of the carbolic acid (phenol) and not less than 10 per cent of ethyl alcohol. All sales of carbolic acid (phenol) thus diluted so as to contain no more than 10 per cent of carbolic acid (phenol) may be made under the same conditions as the drugs enumerated in schedule B as found in section 7, but sales of carbolic acid (phenol) containing more than 10 per cent of said acid shall be registered subject to the same regulations as the poisons enumerated in schedule A as found in section 7.

SEC. 10. That sections 1727x and 1727x1, compiled laws of Utah, 1907, and sections 1727x2 and 7727x3, compiled laws of Utah, 1907, entitled "Patent medicines," as amended by chapter 117, laws of Utah, 1911, and as amended by chapter 48, laws of Utah, 1913, is [sic] hereby repealed.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

PHOENIX, ARIZ.

Milk and Milk Products—Production, Care, and Sale. (Ord. 64, Aug. 14, 1915.)

SECTION 1. On and after September 1, 1915, all milk and cream held, kept, offered for sale or sold and delivered in the city of Phoenix, shall be so held, kept, offered for sale or sold and delivered under either or any of the following grades or designations, and all such milk and cream shall conform to the definitions given in this ordinance, for such grade or designation, and under no other, namely:

- | | |
|--|--|
| (a) Grade A: | (d) Grade D (for cooking and manufacturing purposes only). |
| (1) Guaranteed milk. | (e) Buttermilk or artificial buttermilk. |
| (2) Inspected milk (raw). | (f) Skimmed milk. |
| (3) Pasteurized milk. | (g) Modified milk. |
| (b) Grade B: | (h) Adjusted milk. |
| (1) Selected milk (raw). | (i) Substandard milk or cream. |
| (2) Pasteurized milk. | (j) Heated milk or cream. |
| (c) Grade C (for the manufacture of ice cream only). | |

SEC. 2. No milk or cream shall be held, kept, offered for sale or sold and delivered in the city of Phoenix under either or any of the designations known as grade A, B, C, or D, or any of the subdivision thereof, or any of the designations "buttermilk," "skimmed milk," "modified milk," "adjusted milk," "substandard milk or cream" or "heated milk or cream," without a permit in writing therefor from the health department, subject to the conditions thereof.

Such permit shall specify the grade and subdivision thereof and the special designation of milk which the holder of such permit shall thereby be authorized to keep for sale or offer for sale, as aforesaid.

None of the provisions hereof, however, shall apply to condensed milk when contained in hermetically sealed cans.

SEC. 3. (a) *Grade A; guaranteed milk and cream; definition.*—Grade A guaranteed milk or cream shall be milk or cream produced at farms holding permits therefor from the city health department, and produced and handled in accordance with the following minimum requirements.

(1) Only such cows shall be admitted to the herd as shall have immediately theretofore been subjected to a diagnostic injection of tuberculin and have not reacted.

(2) All such cows shall be tested annually with tuberculin, and all reacting animals shall be excluded from the herd.

(3) Such milk shall not contain more than 10,000 bacteria per cubic centimeter, and such cream not more than 50,000 bacteria per cubic centimeter when delivered to the consumer, or at any time prior to such delivery.

(4) Such milk or cream shall be delivered to the consumer in sealed bottles only, which said bottles shall have been sealed at the dairy or creamery with a cap or crown completely covering the lip of the bottle, and shall be labeled with the day of the week upon which the earliest milking, of which the contents of such bottle may be a part, has been drawn.

(5) Such milk or cream shall be delivered to the consumer within 12 hours of the time at which it was drawn.

(b) *Grade A; inspected milk or cream (raw); definition.*—Grade A inspected milk or cream (raw) shall be milk or cream produced at farms holding permits therefor from the city health department and produced and handled in accordance with the following minimum requirements:

(1) Only such cows shall be admitted to the herd as shall have immediately theretofore been subjected to a diagnostic injection of tuberculin and have not reacted.

(2) All such cows shall be tested annually with tuberculin, and all reacting animals shall be excluded from the herd.

(3) From the 1st day of October to the 1st day of May in each year such milk shall not contain more than 50,000 bacteria per cubic centimeter, and such cream not more than 150,000 bacteria per cubic centimeter, and from the 1st day of May to the 1st day of October in each year such milk shall not contain more than 100,000 bacteria per cubic centimeter, and such cream not more than 300,000 bacteria per cubic centimeter when delivered to the consumer, or at any time prior thereto.

(4) Such milk or cream shall be delivered to the consumer only in bottles, which said bottles shall have been sealed at the dairy or creamery with a cap or crown completely covering the upper surface of the lip of the bottle.

(c) *Grade A; pasteurized milk or cream; definition.*—Grade A pasteurized milk or cream shall be milk or cream produced at farms holding permits therefor from the city health department and produced and handled in accordance with the following minimum requirements:

(1) Only such cows shall be admitted to the herd as shall have immediately theretofore been subjected to a diagnostic injection of tuberculin and have not reacted.

(2) All milk or cream of this grade shall be pasteurized and immediately cooled to a temperature of not to exceed 50° F. and shall be kept at such temperature until delivered to the consumer.

Said pasteurization shall be carried on under a permit issued therefor by the city health department, in addition to the permit for "pasteurized milk or cream, grade A."

(3) Such milk shall not contain more than 30,000 bacteria per cubic centimeter, and such cream not more than 100,000 bacteria per cubic centimeter when delivered to the consumer or at any time after pasteurization and prior to such delivery, and shall not show bacilli of the colon group in 1 cubic centimeter as determined by cultural methods.

(4) Such milk and cream shall be delivered to the consumers only in bottles, which said bottles shall have been sealed at the dairy or creamery with a cap or crown completely covering the upper surface of the lip of the bottle.

(5) Such milk or cream shall be delivered to consumers in the city of Phoenix within 12 hours after the completion of the process of pasteurization.

(6) No milk or cream shall be pasteurized more than once.

(7) No milk containing in excess of 100,000 bacteria per cubic centimeter nor cream containing more than 300,000 bacteria per cubic centimeter shall be pasteurized.

(d) The caps and crowns of all bottles containing milk or cream of grade A shall be white, and shall contain the words "grade A" in black letters, in large type, together with the designation "guaranteed milk," "guaranteed cream," "inspected milk (raw)," "inspected cream (raw)," "pasteurized milk," or "pasteurized cream," as the quality of the contents may require. Such labels shall also bear the date and morning or evening thereof of milking, and, if pasteurized, the date and hour when pasteurization thereof was completed.

(e) No herd shall be considered as having had the tuberculin test applied unless such test shall have been applied by a qualified veterinarian according to the directions laid down by the United States Bureau of Animal Industry by the intradermal method. A written report of all such tests shall be filed with the application for a permit as

hereinafter provided, and a supplementary written report shall be made for each addition to the herd and for each additional test, and all such supplementary reports filed with the original application for permit.

SEC. 4. (a) *Grade B; selected milk or cream (raw); definition.*—Grade B selected milk or cream (raw) shall be milk or cream produced at farms holding permits therefor from the city health department and produced and handled in accordance with the following minimum requirements:

(1) Only such cows shall be admitted to the herd as shall have immediately theretofore been physically examined by a regularly qualified veterinarian and declared by him to be healthy and free from tuberculosis in so far as a physical examination may determine that fact. All such cows shall be examined annually by a qualified veterinarian and all diseased animals shall be excluded from the herd.

(2) From the 1st day of October to the 1st day of May in each year, such milk shall not contain more than 150,000 bacteria per cubic centimeter and such cream not more than 500,000 bacteria per cubic centimeter, and from the 1st day of May to the 1st day of October in each year, such milk shall not contain more than 300,000 bacteria per cubic centimeter and such cream not more than 1,000,000 bacteria per cubic centimeter when delivered to the consumer, or at any time prior thereto.

(b) *Grade B; pasteurized milk or cream; definition.*—Grade B pasteurized milk or cream shall be milk or cream produced under a permit issued therefor by the city health department and produced and handled in accordance with the following minimum requirements, and in further accordance with the requirements hereinbefore provided for and relating to the pasteurization of milk and cream.

(1) All herds shall be examined annually by a qualified veterinarian and all diseased animals excluded from the herd.

(2) All containers in which such grades A or B pasteurized milk or cream be delivered to the consumer shall be plainly labeled "grade A pasteurized" or "grade B pasteurized," as the case may be. Such labels shall also bear: The day of the week and the hours of milking; the date and hour when such pasteurization shall have been completed; the place where such pasteurization shall have been performed; and the name of the person, firm, or corporation performing such pasteurization.

(3) Such milk shall not contain more than 100,000 bacteria per cubic centimeter, and such cream not more than 300,000 bacteria per cubic centimeter when delivered to the consumer or at any time after pasteurization and prior to such delivery, and shall not show more than 100 bacilli of the colon group in one cubic centimeter, as determined by cultural methods.

(4) Such milk or cream shall be delivered to consumers in the city of Phoenix within 24 hours after completion of the process of pasteurization thereof.

(5) No milk or cream shall be pasteurized more than once.

(6) No milk containing more than 500,000 bacteria per cubic centimeter and no cream containing more than 1,000,000 bacteria per cubic centimeter shall be pasteurized.

(c) Caps or crowns of bottles containing milk or cream of grade B shall be white and marked "grade B" in black letters in large type, together with the words of the subdivision to which the quality of such milk or cream in such bottles conforms.

The necks and shoulders of all cans containing milk or cream of grade B shall be painted bright green, and a tag shall be affixed to each can, with the words "grade B" in large type, together with the words of the subdivision to which the quality of such milk or cream in such cans conforms.

SEC. 5. (a) *Grade C; pasteurized milk or cream for the manufacture of ice cream only; definition.*—Grade C pasteurized milk or cream shall be milk or cream produced at farms holding permits therefor from the city health department and produced and handled in accordance with the requirements of grade B pasteurized milk or cream, with the following exceptions:

(1) No milk containing more than 1,000,000 bacteria per cubic centimeter, and no cream containing more than 2,000,000 bacteria per cubic centimeter, shall be pasteurized.

(2) Such milk or cream shall be sold only at wholesale and only to restaurants, hotels, and ice-cream manufacturing plants, and the same shall not be sold by them except in the form of ice cream.

(3) Necks and shoulders of all cans containing milk or cream of grade C shall be painted yellow and a tag shall be affixed to each can with the words "grade C" printed thereon in large type.

(b) *Grade D; milk or cream for cooking and manufacturing purposes only; definition.*—Grade D milk or cream shall be milk or cream not conforming to the requirements of any of the subdivisions of grade A, grade B, or grade C, and may be sold under the following conditions:

(1) Milk or cream of grade D shall not be sold at retail from stores, hotels, restaurants, or manufacturing plants.

(2) Milk or cream of grade D may be sold to restaurants, hotels, and manufacturing plants only, but shall not be sold by them except in the form of manufactured products.

(3) Cans containing milk or cream of grade D shall be painted red on the necks and shoulders, and each such can shall be provided with a tag containing the words "grade D" in large type, and shall also have painted on them in white figures not less than 2½ inches high the number of the permit issued to the dairy from which such cans come. All creameries handling milk or cream of different grades shall be required to demonstrate to the city health officer that they are capable of keeping such grades separate, and shall keep records thereof satisfactory to the city health officer concerning the amount of milk and cream and of each grade thereof handled each day.

(4) Nothing in this ordinance shall be so construed as to permit the use of milk or cream of grade D in the manufacture of ice cream or any uncooked product.

SEC. 6. *Definitions; (a) milk.*—Milk shall be the fresh, clean lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding such secretion obtained during the period of 15 days next before calving and for the period of 8 days next after calving; and containing, by weight, not less than 3.25 per cent of milk fat, and a total of milk solids of not less than 12 per cent.

(b) *Cream.*—Cream shall be that portion of milk, rich in milk fat, that rises to the surface of milk on standing, or that may be separated from milk by centrifugal force, and the same shall be fresh and clean, and shall contain, by weight, not less than 20 per cent of milk fat, and in the nonfatty portion thereof not less than 8.8 per cent, nor more than 9.8 per cent of milk solids.

(c) *Pasteurized milk or cream.*—Pasteurized milk or cream shall be milk or cream that shall have been heated to a temperature of 140° F. for not less than 20 minutes, or of 155° F. for not less than 5 minutes, and for each degree of temperature over 140° F. the length of time may be 1 minute less than 20: *Provided*, That no such milk or cream shall be so heated for less than 5 minutes. Such milk or cream shall be cooled immediately thereafter to 50° F. or below, and except as provided for grade A pasteurized milk and cream shall be kept at or below that temperature until started on final delivery route.

(d) *Buttermilk and artificial buttermilk.*—Buttermilk shall be the product remaining after butter shall have been removed from milk or cream in the process of churning and shall contain, by weight, not less than 8 per cent of milk solids. Any milk product simulating buttermilk manufactured by any process other than the above shall be known and labeled as artificial buttermilk.

(e) *Skimmed milk.*—Skimmed milk shall be milk from which all or a portion of the milk fat shall have been removed, and which shall contain, by weight, in the nonfatty portion thereof not less than 8.8 per cent of milk solids. Such skimmed milk may be handled in accordance with the following minimum requirements:

(1) All cans and other receptacles containing such skimmed milk shall have the entire outside thereof painted a bright red and kept so painted at all times while in use for such purpose.

(2) Such cans and other receptacles shall also have painted on the outside thereof, not less than 6 inches from the top of such cans or other receptacles, the words "skimmed milk" in plain, bright yellow letters not less than 3 inches in height and 1 inch in width on two sides thereof.

(3) *Provided, however,* That these regulations shall not apply to such skimmed milk sold in bottles. In such cases the words "skimmed milk" shall be printed, stamped, or painted clearly and legibly on the caps or crowns closing such bottles.

(f) *Modified milk.*—Modified milk shall be milk of subdivision 1 or 2 of the classification known as "grade A," which shall have been changed by the addition of water, barley water, limewater, sugar of milk, or other substances intended to render the milk suitable for infant feeding. All modified milk shall be pasteurized after bottling, immediately cooled to at least 50° F., and kept at or below such temperature until delivered to the consumer.

(g) *Adjusted milk.*—Adjusted milk shall be milk in which the ratio of the fats to the solids not fat shall have been changed by the addition thereto or subtraction therefrom of cream. All labels upon the containers of adjusted milk shall show the minimum guaranteed percentage of fat therein, and the handling and disposition of such milk shall comply with the same sanitary and chemical requirements as for milk not so standardized or modified.

(h) *Substandard milk.*—Substandard milk shall be any natural milk that shall contain less than 3.25 per cent, but more than 2.5 per cent of milk fat, and substandard cream shall be any cream that shall contain less than 20 per cent of milk fat, provided both such milk and cream shall comply in all other respects with the requirements set forth in this ordinance, and may be handled in accordance with the following requirements:

(1) The percentage of fat in such milk or cream shall not fall below a definite percentage and such definite percentage shall be stated in a conspicuous manner on the container, and such container shall be conspicuously marked "substandard milk" or "substandard cream."

(i) *Heated milk or cream.*—All milk or cream the temperature whereof shall have been artificially raised, in which the process shall not conform to that prescribed for pasteurized milk or cream, as defined by this ordinance, or which shall have been subjected to the process known as "pasteurization by the flash method," shall be known and labeled as "heated milk" or "heated cream." Prior to the heating such milk or cream shall conform to the requirements specified for milk or cream of grade B pasteurized prior to pasteurization. No such milk or cream shall be held or offered for sale in the city of Phoenix after December 31, 1915. *Provided, however,* "Homogenized" cream may be sold if labeled "homogenized cream" and the percentage of milk fat guaranteed be stated in not smaller than 10-point type on the label of the container thereof.

SEC. 7. (a) *Permits.*—A permit for the sale of milk or cream of any grade or designation may be granted only after an application therefor shall have been made in writing on a blank provided for such purpose by the city health department, and to such applicants only as shall fully comply with the provisions of this ordinance. Such permit shall designate the grade or special kind of milk or cream to be sold thereunder; no such permit shall be transferable either as to the person, firm, or corporation to whom issued, or as to the location of the farm, dairy, creamery, store, or shop covered thereby. All permits shall expire on the 1st day of January of each year and shall be renewed in the manner provided for an original permit.

(b) Within 15 days before the 1st day of January of each year permits may be renewed by the city health department for the ensuing year to any applicant who shall fully comply with the provisions of this ordinance.

(c) Before the issuance of any such permit to any vendor or shipper of milk or cream the applicant for such permit shall make application therefor upon a printed form, provided by the city health department for that purpose, on which shall be stated:

(1) The name, residence, post-office address and location of the business place or places of the applicant, and if a corporation, the name of the manager.

(2) A statement of the grade of milk or cream or both thereof, as hereinbefore defined, such applicant intends to sell.

(3) If the applicant proposes to buy part or all his milk or cream supply, the names and addresses of all persons from whom he proposes to obtain such milk or cream, or from whom he proposes buying such milk or cream during the period covered by such permit, and the amount in gallons, approximately, of milk or cream obtained or to be obtained from each. In the case of applicants buying or selling milks or creams of different grades, a separate application and permit shall be required for each grade.

(4) The number of cows from which such applicant proposes to obtain milk for sale or other disposition.

(5) The approximate average daily quantity of milk and cream proposed to be sold.

(6) If it be proposed to sell any milk or cream at wholesale, the name of consignee or consignees.

(7) The source of all water supplies to be used for watering cattle, washing utensils, or otherwise utilized in producing such milk or cream.

(8) The location of all privies and cesspools with relation to (a) the well, (b) the stable, (c) the milk house, (d) other premises wherein any such milk or cream is to be handled or from which sold.

(9) Whether or not unfenced ditches or adobe holes, to which the cows from which any such milk is proposed to be obtained may wade in, exist on the farm.

(10) If such applicant be a shipper of milk or cream into the city, he shall, in addition to the above, state the route over which he proposes to make shipments.

(11) Such other information as the city health officer may require.

(12) All applications for permits shall be made and signed by the applicant, and shall constitute an agreement on the part of such applicant that he will conform to the terms of this ordinance and all requirements of the city health officer made under the provisions of this ordinance.

(d) At the time of filing an application for permission to produce, sell, or otherwise dispose of milk or cream other than that of grade D, the applicant, if a producer, shall file a certificate from a qualified veterinarian that the herd from which milk or cream be produced has been inspected or tuberculin tested, as the case may be: *Provided, however*, that applicants for permits to sell or produce grade D milk or cream shall produce and file a properly verified certificate that there are no animals in the herd which have reacted to the tuberculin test.

(e) The health department shall issue no permits for the sale or other disposition of milk or cream, other than grade D milk or cream, unless the city health officer be satisfied, after inspection: With the cleanly and sanitary condition of the stables, cows, wagons, store or place of business of the applicant therefor, and of all the utensils used in the production and handling of such milk or cream; that the water supply for use in the dairy is pure and wholesome; that no adobe holes or other stagnant water exists in a place in which the cows may wade; and that all persons engaged in the care and handling of the milk are free from any contagious diseases; that said persons use due cleanliness in their work, and that all other provisions of this ordinance shall be complied with. Permits may be issued for milk or cream of grade D subject to future inspection. No permits for pasteurizing plants shall be issued until all the

apparatus connected with the pasteurization shall have been tested and the processes approved by the city health officer.

(f) The city health department shall assign a number to each permit issued and issue to each permittee a sufficient number of cards bearing this number in plain figures not less than 2½ inches in height, which cards shall be placed in a conspicuous place on all vehicles used in the transportation of milk or cream produced, sold, or otherwise disposed of by the holder of such permit; and in addition thereto such vehicle shall bear a number and the same placed thereon by the permittee.

(g) The city health department shall enter in a book, or card-index system, provided for that purpose, the name of each person to whom a permit shall have been issued, stating the name, place of residence, and postoffice address of such person, and the date of issuance of such permit. All applications for permits shall be kept and filed by the city health department as a part of its records.

SEC. 8. *Revocation of permits.*—If, after the issuance of a permit to sell, produce, or handle milk or cream, the city health officer shall become satisfied that any provision of this ordinance is being violated, he shall at once revoke the permit issued to such person or persons so violating this ordinance, and no new permit shall be issued until all unsanitary conditions have been rectified and all the provisions of this ordinance are complied with. Any person doing business under a permit from the city health department who shall change the location of such business, or change the source of supply as given in the application for the permit, or make or know of any addition to the dairy herd from which his product is being obtained, without notifying the city health officer and the city health department of such change, shall be liable to have such permit revoked without notice.

SEC. 9. *Milk tickets.*—Any permittee under this ordinance offering milk or cream for sale, using tickets as representatives of values, shall use tickets in coupon form, and such tickets shall be destroyed after once using. No milk ticket shall be collected by any dairyman from any person afflicted with, or from any house in which there exists, a contagious or infectious disease.

SEC. 10. *Milking place.*—All stables, corrals, and other places where milk is to be drawn from cows shall at all times be thoroughly cleaned and all dust allowed to settle before milking begins.

SEC. 11. *Cows.*—Cows shall be kept clean; manure, mud, litter, or other material shall not be allowed to become caked and dried on them. They shall not be allowed to stand in nor wade through filth or manure, and shall be cleaned by currying and brushing and the flanks and udders cleaned with a wet or damp cloth immediately before each and every milking. The hair on the flanks and about the udders shall be kept clipped short.

SEC. 12. *Feed and water.*—Cows shall be fed on clean feed, which shall be neither decayed, moldy, nor dusty. On and after October 1, 1916, pure water, free from contamination, pumped in clean tanks, shall be provided in sufficient quantity for watering the cows, cleaning the utensils, and for all other dairy purposes.

SEC. 13. *Milkers.*—The milkers shall be persons in good health and shall thoroughly wash their hands with soap, warm water, and nail brush, and dry them on clean individual cloths, or paper or cloth towels immediately prior to each milking. Under no circumstances shall the use of roller or like towels be permitted. All milking shall be done with dry hands. No person known to be a typhoid, diphtheria, or other contagious or infectious disease carrier shall be considered a person in good health.

SEC. 14. *Utensils.*—All cans, bottles, and other utensils of every sort used in the production, storage, sale, or distribution of milk or cream in this city shall be cleaned and sterilized with boiling water or steam before they are again used for the same or like purpose, and all cans, measures, or other utensils made of metal shall be kept free from dents and rust, and there shall be proper appliances for washing all utensils used in the production, mixing, storage, sale, or distribution of milk or cream, and

all utensils shall be washed, cleaned, and sterilized with boiling water or steam regularly after being so used. The filling of bottles except at the dairy or creamery shall be strictly prohibited. If any name or initials appear upon any bottles or cans used for delivery such name or initials shall be the name or the initials of the person, firm, or corporation in whose service such container is being used, and no other.

SEC. 15. *Water*.—The water used in washing apparatus, utensils, cows, and hands of milkers shall be from a public water supply, or from a well or spring approved by the city health officer.

SEC. 16. *Wagons or vehicles*.—No milk or cream shall be brought into or carried within the city of Phoenix for the purpose of sale or other disposition which shall have been carried upon any wagon or vehicle which shall not be clean and free from offensive odors or upon which swill, refuse, garbage, or decaying, unwholesome, or filthy matter shall have been carried. If any name appear upon such vehicle, such name shall be the name of the dairy or owner in whose service such vehicle is being used. Such vehicle shall also bear the permit number as elsewhere provided.

SEC. 17. *Privy*.—All farms shall be equipped with a sanitary fly-proof privy or cesspool, located at least 100 feet from any well, or connected with a sanitary sewer. If a privy, such privy shall be located at least 100 feet from all milk houses and milking corrals, and the construction thereof, together with that of any cesspool, shall be subject to the approval of the city health officer, and any such privy or cesspool shall be removed or filled up and abated on the order of the city health officer.

SEC. 18. *Stagnant water*.—No stagnant pool or adobe hole in which the cows may wade shall be permitted on any dairy farm.

SEC. 19. *Milk house*.—Immediately after milking, all milk shall be removed from the stable into a milk room thoroughly screened from flies and other insects, and there cooled or separated if either thereof is to be done upon the premises, and put into perfectly clean bottles or cans. The milk house or milk room shall be located at least 15 feet from any other building and at all times shall be kept in a clean and sanitary condition. Dairymen and other milk and cream dealers and handlers using both bottles and cans in handling and delivering milk and cream shall not, under any circumstances, fill bottles while on their delivery route.

SEC. 20. *Stores and shops*.—Milk or cream being kept for sale in any shop, restaurant, market, bakery, or other establishment, shall be stored in a covered ice box or refrigerator. No vessels containing milk or cream for sale shall be allowed to stand outside of such ice box or refrigerator except while a sale of same is being made. Every such ice box or refrigerator shall be properly drained, cleansed, and cared for, and shall be kept in a thoroughly sanitary condition and only in such locations as shall be approved by the city health officer.

Creameries, milk depots, pasteurizing plants, or other establishments where milk or cream is bottled, pasteurized, heated, or manufactured into a milk product, shall be provided with floors of water-tight construction so laid as to allow ready drainage. They shall be properly lighted and ventilated; the equipment shall be so arranged and constructed that it can be easily and efficiently cleaned, and such establishment shall be efficiently screened in all parts where milk or cream is exposed or transferred from one receptacle to another. No persons other than officers or employees of the person, firm, or corporation operating such establishment, or duly authorized officers or agents of the city of Phoenix, the county of Maricopa, the State of Arizona, or the United States, shall enter the pasteurizing or bottling room unless accompanied by an officer of the firm or corporation operating the creamery or other establishment, as the case may be.

SEC. 21. *Contagious diseases*.—Should septic sore throat, scarlet fever, smallpox, diphtheria, typhoid fever, tuberculosis, or other dangerous, contagious, or infectious disease occur in the family of any dairyman or milk handler or vendor, or among any of his employees or in the family of any thereof, or in any house in which milk is kept

for sale, or in the family or among the employees of any person who ships milk into the city for sale, such dairyman, vendor, handler, or shipper of milk shall immediately notify the city health officer and at the same time shall immediately suspend the sale, handling, or distribution of milk until authorized to continue the same by the city health officer. The city health officer shall make immediate investigation and may permit the sale of such milk under such regulations as he shall deem proper.

Should any such dairyman, handler, vendor, or shipper of milk fail to so notify the city health officer when any such disease exists in his or her family, or in the family of any of his or her employees, or in any house in which milk is kept for sale, or who, after such information is given the city health officer, shall fail to obey his directions, the city health officer shall seize and destroy all milk and cream sent into the city by any such person and all milk or cream of which such milk or cream may form a part, and such officer shall, when acting in good faith, be held harmless in damages therefor in any suit or demands made.

In delivering milk to any family in which there exists any of the above-named diseases other than tuberculosis, the dairyman or other vendor shall not enter, nor shall he permit any of his milk bottles or vessels to be taken into such house, but he shall pour such milk or cream as such family may wish into vessels furnished by such family. No bottle or other container previously left with such family in which any such disease occurs shall be removed therefrom except with the consent of the city health officer.

SEC. 22. *Adulteration and misbranding.*—No milk or cream which shall have been watered, adulterated, or misbranded shall be brought into the city of Phoenix, or held, kept, sold, or offered for sale at any place in said city except as in this ordinance provided.

The term "adulterated milk or cream" or "misbranded milk or cream" when so used in this ordinance shall mean:

(1) Milk or cream which shall have been adulterated with water or any other fluid, or into which there shall have been introduced any foreign substance whatever.

(2) Milk or cream containing an appreciable amount of dirt, foreign matter, or sediment.

(3) Milk or cream drawn from cows suffering from sore or inflamed udders or teats, or from cows otherwise diseased, or which have reacted to the tuberculin test.

(4) Milk or cream which shall have been repasteurized.

(5) Milk or cream reacting to the usual or ordinary test or tests for formalin, salicylic acid, or boric acid.

(6) Milk or cream so labeled or branded as to deceive or mislead or tend to deceive or mislead the purchaser, or if it be falsely labeled in any respect, or if the bottle or other receptacle, or its label or tag, shall bear any statement, design, or device regarding the contents of such bottle or other receptacle, which statement, design, or device shall be false or misleading in any particular.

SEC. 23. *Dairy scores.*—The city health officer shall as often as once in every three months inspect and score or cause to be inspected and scored all dairies, dairy farms, creameries, and other places where milk or cream is produced, handled, or sold, and to which permits shall have been issued for the production, handling, or sale of milk or cream other than grade D and buttermilk. He shall also once in every three months cause to be taken and examined chemically and bacteriologically not fewer than three samples of the milks and creams aforesaid, and at such other intervals as he may deem fit. He shall thereupon make up a score for each of such dairies, dairy farms, creameries, and other places, which scores shall be based upon:

(a) The inspection score card for the dairy or dairy farm, or if a creamery or other place, the dairies and dairy farms in proportion as they contribute to the milk and cream supply of such creamery or other place, and the score of the creamery or other place itself.

(b) The chemical analysis of the milk and cream for total solids.

(c) The bacterial count as determined by an average of not fewer than three counts.

The percentage of milk fat shall be determined by the Babcock test. The percentage of solids shall be calculated by the Richmond slide rule method.

The tests for the bacterial count shall be made in conformity with the methods of the American Public Health Association, except that 1½ per cent agar shall be used instead of 1 per cent agar.

A copy of such score card or score cards to be used in the scoring of dairies, dairy farms, creameries, and other places, shall be furnished to each applicant for a permit to produce or sell milk or cream other than grade D at the time of the making of such application. The city health officer shall also have published at least once in the official newspaper the methods by which the total score for dairies, dairy farms, creameries, and other places is reached. Such method shall not be changed without likewise publishing in a conspicuous manner any changes in such method or methods of scoring. All scores shall be published at least once in every three months. All dairies, dairy farms, creameries, and other places producing, selling, or handling milk or cream of grade D and buttermilk shall be inspected at least once annually and as much oftener as may be necessary, to see that same conform to the provisions of this ordinance.

SEC. 24. For the purpose of enabling the city health officer and the city health department to carry out and enforce the provisions of this ordinance, the city health officer, or any qualified inspector or agent of the health department, shall at all times have free access to all barns, stables, dairies, creameries, stores, wagons, and all other buildings or premises in which cattle are kept from which any part of the milk supply of the city of Phoenix be obtained or in which milk be received, kept, bottled, canned, or offered for sale, for the purpose of inspecting said premises, cattle, vehicles, cans, vessels, measures, and other utensils used in conducting the production, handling, sale, or delivery of milk or cream, and for the purpose of taking for analysis or other tests, to determine the quality thereof, samples of milk or cream kept or intended for sale or other disposition in the city of Phoenix. And all persons holding permits for the production, handling, or sale of milk or cream of any grade or designation, shall, for such purposes, allow such free access as above specified, and shall allow samples not to exceed 1 pint of milk or one-half pint of cream, to be taken by the city health officer, or any person deputed by him, at any time upon demand.

SEC. 25. Words used in the singular shall include the plural and used in the plural shall include the singular, and the word "person" as used in this ordinance shall include firm and firms, corporation and corporations, association and associations, and the provisions hereof shall include and embrace agents, servants, and employees as well as principals and employers. The word "milk," unless otherwise specified or defined and in so far as applicable to sections 7 to 22, inclusive, shall be held and construed to mean any liquid or produce included and enumerated in section 1 of this ordinance.

SEC. 26. Copies of this ordinance shall be printed and a copy of the same delivered with each permit or renewal of same, and such copy shall be posted in a conspicuous place at the dairy, dairy farm, creamery, or other place, of the person holding such permit.

SEC. 27. Any person violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall, for the first offense, be fined not to exceed \$25, or imprisoned in the city jail not to exceed 10 days; for the second offense such person shall be fined not less than \$25 nor more than \$100, and shall be imprisoned not less than 10 days nor more than 90 days in the city jail; for the third offense, such person shall be fined and imprisoned as provided for the second offense and, in addition thereto, the permit held by such person shall be revoked and no permit shall thereafter be issued to such person for a period of two years.